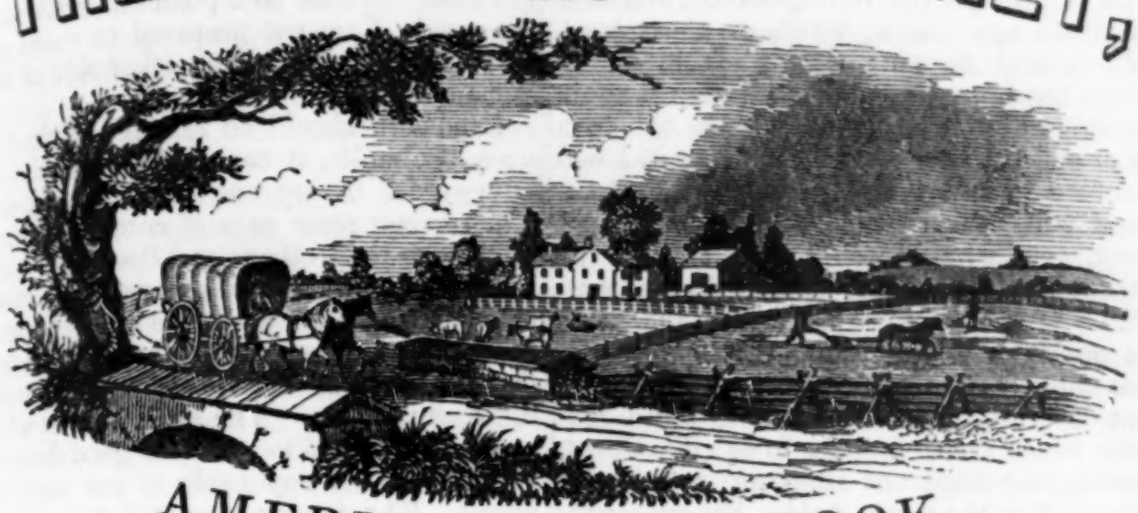
# THE FARMERS' CABINET,

AND



# AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—Liebig.

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For the Farmers' Cabinet.

## The Preparation of Seed.

Mr. Editor,—I do not know any subject in the whole range of agricultural pursuits, upon which labour can be so profitably bestowed as in the preparation of seed. It is lamentable to observe the immense loss which is continually sustained in consequence of indifference and carelessness on this point; and it is really to be feared that every species of grain will continue to degenerate in quality and diminish in quantity, unless the farmer is awakened to a proper sense of the importance which he should attach to this part of his business. It has been the observation of almost every man, that those products of the farm which are less valuable, and which, therefore, the farmer is more indifferent about, are annually growing worse in quality. Oats are lighter in the grain and upon the ground than they were formerly, and rye is becoming so exceedingly bad in quality, and so uncertain a crop, as to be scarcely worth committing to the ground. Farmers are heard constantly to express their wonder why the product of the rye crop is not as it was formerly, and that they cannot raise as much oats to the acre as they used to do; but they will cease to wonder, if they will but reflect how exceedingly indifferent they have been, with regard to the quality of the seed which they have used. The importance and value of the wheat and corn crops, have sometimes induced them to make an exertion to procure better seed than their own; but who ever takes the trouble to go beyond his own granaries to seek for seed rye or oats? or who ever takes more pains in its preparation, than to measure it into his bags from the pile, as it comes from the barn floor? To this alone is attributable the fact that these crops make but a scanty return for the labour bestowed upon them. I do not urge the recollection of these things for the sake of these crops, for I do not deem them essential to the farming interest, beyond the small amount of them which the farmer may be supposed to require for his own immediate consumption; but the same reasons and principles precisely are appliable to wheat and corn, to which we attach so much importance. If in the preparation of seed wheat, we take the grain as it is prepared for grinding, and run it through the wind-mill at a speed which will blow one-fourth or one-third of it out, and with this,

nearly all the weed and grass-seeds—then run it through the rolling-screen, and thus separate any cockle, weed, or cheat seed, which may remain; then wash it, and if there has been any smut in it, wash it again in salt water, and spread it upon the barn floor and sift lime upon it and mix it, I will venture to assert that in any soil, the product will be increased from 15 to 20 per cent. over what it would have been, if the wheat had been sown without this preparation. If this be so, what labour and pains so profitably spent? And that it is so, is not only constantly taught us by experience, but is perfectly consistent with those reasons which are so familiar to us all. Cheat, cockle, rag-weed and smut, are principally what infest the wheat field. Where weeds grow, they occupy the place of wheat, and take that nourishment from the ground which the wheat should have; and I need not use any argument to prove that they will not grow unless the seed is in the ground, and that it will not be there—at least in such quantities—unless it be put there. Indeed I know from experience, that in the course of a few years these weeds will be wholly exterminated by that strict attention to the cleansing of seed which is here recommended. Smut is but an infectious disease of the grain, and is common to wheat, corn, and oats; but no one need have it in either, if he will but take the trouble to cleanse his seed. For several successive years have I made the experiment of cleansing smutted wheat, by washing a small portion of it in salt water and putting lime upon it, and venture the assertion that it will never fail to purify it. I have also taken pure wheat and mixed smut with it, and thus communicated the disease, and it will never fail to produce smutted wheat. The same remark may be made with regard to oats and corn; for the blighted head of oats, and the large black excrescence which sometimes grows upon corn, although different in appearance, are essentially the same thing.

It is a very common impression that wheat is improved by changing it from one kind of soil to another. It may be so; and if "what every body says must be true," it is so: but I may be permitted to doubt it, if it be only for the purpose of inducing thought and observation on this point. Each one of your readers is prepared to say, "I know this from experience;" but, notwithstanding, it is still worth the inquiry, whether his experience is not this,—that when he went from home after seed, he went after *good* seed—better than his own, which he sowed in the next field, and cultivated in the same way, and upon which his observation induced him to come to the conclusion, that the seed he got from the slate land produced better than his own? I am not prepared to enlist myself upon the one or the other side of this question.

Seed corn should be selected while it is upon the stalk; it cannot be so well done afterwards. Every one has observed how much sooner some ears of corn in the same field ripen than others, and that some stalks bear two and some three ears, while others have but one. All analogies and experience teach the advantages which are derived from the selection of those ears which possess these advantages. The same reason which would induce us to select a good breed of hogs, is equally applicable to our corn and wheat. The farmer who will turn his attention to a proper selection and preparation of his seed, will be much surprised how little labour will produce a great result. W.

Carlisle, March 17th, 1845.

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## Improvement under Difficulties.

We sometimes hear intelligent men inculcating the sentiment, as if they really believed it, that a farmer need not expect to get any valuable information in his calling from agricultural books. We claim for ourselves freedom of opinion—of course we grant it to others. The article below, which we take from the Southern Planter, is of so matter of fact a character, and altogether so practical in its bearings, that we could scarcely give in the same room a more thorough refutation of the doctrine, that reading is useless to the farmer.—Ed.

Mr. Editor,—In the year 1819 I bought the farm on which I now reside. It was then without buildings, nearly without fence, and so poor and exhausted, and had been neglected so long, that most of it was overgrown with bottle-end pines. From the year I purchased, up to 1834, I can venture to say, that very few persons would have cultivated this farm could they have been permitted to do so rent free, and during this period the money I made, although I followed the oyster business in the winter, was very little. Yet, by economy and great industry, I was enabled to build myself a small dwelling house, a log-kitchen, and crib. The growing expense of a young family, and the small product of my farm almost discouraged me, and at that time so little was known by myself or neighbours of the true value of manure and the best mode of using it, particularly on the corn crop, that I saw no prospect of making a comfortable living. But as good fortune would have it, your valuable periodical fell into my hands, and in reading its pages, ideas were suggested to my mind

that have been of immense value to me, and have enabled me to be very prosperous and happy. I was reading one day about the rocky land in the old countries, where I found the following statement: "A very wealthy gentleman, I believe in Switzerland, who was of the opinion that the very rocky land thereabouts could be made productive and profitable, built several small huts on that rocky land, and induced poor families to live in them by giving them a year's provisions, and at the same time requiring them to use their industry to improve the land and provide for themselves. They were required to bring turf and dirt from the nearest bog, and this they used by putting one spadeful to each dimple for potatoes. The next year they put one more spadeful to the same dimple and raised a second crop of potatoes. These crops proved very good, although so little dirt was thrown among the rocks; and at the expiration of two years these hitherto barren rocks were found to be so productive as to be rented out, which was done by the wealthy proprietor, who received in a few years a full remuneration for all the expense of the first outlay in establishing these poor people." These experiments and their results, so surprising, induced me to make trials with manure in corn crops, and opened the door of prosperity to me. In 1834 I made experiments with horse manure on corn. I took a single cart-load and applied it, using but one pint to the hill, and to my surprise found it had doubled my crop where used. This gave me fresh courage, and the next year so sanguine were my feelings, that I purchased at Norfolk fifty dollars worth of manure. This, with what I raised, enabled me to manure my whole crop of corn, sweet potatoes and melons, and every thing else that I planted. Applying my manure to my corn, as in my first experiment, I found I made not only enough for my family, but nearly enough for two such families. And since, from year to year, I have continued buying about the same quantity of manure. It cost me at the stable fifty cents a load, or sixty-two and a half cents at the wharf, whence I convey it in lighters to my farm. All the real or stable manure I apply to corn; I do it as follows: for every 120 corn-hills, or sometimes for one hundred, I measure out two bushels of manure by a bushel box, which I keep for this purpose, and drop it over the field in heaps; my servants then, with a box under one arm, holding about a peck, and with a paddle in the other hand which will hold a pint, apply it to the hill where the corn is to be planted. I am fully convinced that stable manure should in no case be used broadcast in its application to corn.

My corn land, under the above management, has gradually improved. I have found great benefit from oyster shell marl.

I have adopted the following rotation of crops: first year corn, second year corn, third year small grain, fourth year clover; but have not yet entirely succeeded in the clover crop. Rather than tend my land after oats, I should prefer three successive crops of corn.

Owing to the great flood of rain last year, 1842, my crop was small; but never since I commenced buying manure, have I been discouraged.

In 1828 I planted me a peach orchard.—Peaches then were worth in our market from 50 to 75 cents per bushel, but when my trees had become bearers, I was enabled to get, by retail in Norfolk market, from two dollars and fifty cents to three dollars per bushel. For the last three years I have sold to Baltimore hucksters a large portion of my peaches. I sold them at five dollars per barrel, being barreled on the farm and then delivered by myself at Norfolk, aboard the steamboat. When my orchard bears well, I can deliver from three to ten barrels per day, and send one boat load to be retailed at Norfolk market. WILLIAM GRIMES.

Norfolk county, Va., 1844.

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## Agriculture, &c., of the Cherokees.

From the *Cherokee Advocate* published at *Tahlequah*, we take the following paragraphs, which are contained in the Report of P. M. Butler, United States agent, lately made to the Commissioner of Indian Affairs.—ED.

THE cultivation of the soil is now the only means of support possessed by the Cherokees, there being no game within the limits of their territory. Their soil is fertile, and yields an abundant support with but little labour. They raise an abundance for consumption, but nothing for exportation, at least not in sufficient quantities to derive any income from it. Their country is admirably adapted for grazing cattle, of which all of them have stocks more or less large. In consequence of the climate, only a portion of the country, resembling the northern parts of Alabama, is suited for the cultivation of cotton; tobacco and hemp grow well. They are very much in want of a good merchant mill; it would act as a stimulant to the raising of wheat, for which the soil and climate are peculiarly fitted. Though the soil, which is of limestone foundation, like all limestone regions, yields an abundant supply of springs, yet, except where these springs are found,

there is, during the summer and fall months, a great scarcity of water.

Among the Cherokees there are many native mechanics, such as blacksmiths, carpenters and gunsmiths. Looms are manufactured; and in one instance, a wooden clock was made. Many of them possess a great talent for the mechanic arts. I may here mention, as a gratifying evidence of the improvement of the Cherokees, the universal industry and the great ingenuity manifested by the females in manufacturing cloth and many other articles of domestic economy. Considering the very few advantages possessed by them, they evince a highly creditable degree of skill.

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### Steaming of Cattle, &c.

Cattle are being steamed up, at the West to advantage; and where pasturage is cheap and cattle are plenty, it is doubtless a sure mode of disposing of stock to some profit. The importance of this subject deserves a more minute statement of the disposition of the whole carcass, upon which the gain depends.

The hide is salted with fine salt on the flesh side, and subsequently sprinkled with coarse salt, and rolled up for the English market, into which it is admitted at the low duty of about six cents per cwt. The The hide shrinks about 18 pe cent.; nets from four to five cents per lb. And here I would remark, that this foreign market is much better than the domestic market at the West. The hoofs are soaked in warm water—not boiled—and then the flesh is taken out for oil, while the horn part is sent to Europe as a substitute for shell in making combs. From the thigh and shoulders are taken from 75 to 100 pounds of lean meat, suitable for drying. If the British market, or the market at the East is good, 100 pounds of beef of the very best cuts are also reserved for the barrel. The liver is rubbed over with saltpetre, and then dry salted for about two or three weeks, and hung up to dry. This makes a most excellent relish during the summer, if fried in butter. The great object is, however, to extract from the carcass all the oil or grease both from the flesh and bones. For this purpose the carcass is cut into pieces and thrown into an iron cylinder, capable of holding from 10,000 to 15,000 pounds of beef. After the top is fastened down, steam is let in to the extent of 70 pounds to the square inch, which is equal to 306 Fahr.

After boiling 12 to 14 hours, and the oil or grease has risen to the top, it may be drawn into barrels for the European market. If this pressure of steam is continued upon the bones for a few hours more, they become soft. The rich soup in the kettle affords a most excellent nourishment for swine, especially if shorts or meal be added. It is estimated that 40 beeves killed per day, and tried up in the manner stated, will feed 600 to 1000 hogs. The pork, it is true, will not be equal to the corn-fed, but will try up to advantage for lard, leaving also a further supply of soup.

If we consider the low price of cattle in the West—viz. $8 to $10 for a large steer—the cheapness of pasture, and the quantity of fat which is acquired by one summer's feed, we cannot doubt that this plan will give a certain market, which is far better than none.

The time will soon come when more attention will be paid to the selection of cattle for their hides. Some hides are actually worth twice as much as others for their wear, after being tanned. The hides of the Durham cattle, for instance, are more open and porous than the hides of the native cattle, and hence their suffering from cold; and far less so than of the Scottish cattle upon the mountains. Very little has hitherto been said upon this point. I have written for information, which may arrive too late for this report.

The question arises,—how much tallow will a fat steer afford? The following statement I received from a large packer at Cincinnati: If the ox weighs 700 pounds, deduct 25 pounds for kidney-tallow; for rough gut tallow, 50 pounds; allow 100 pounds for hide, and 100 pounds for the lean meat for drying; this will leave 425 pounds to be tried up. If the hide only is taken out, leaving 600 pounds. This, it is supposed, will give,—if the steer is fat—from 25 to to 30 per cent. of tallow or grease, and may be increased 6 or 10 per cent. The estimate given me is this:

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|---|---|
| Hide, 100 lbs. at 4 cents, | $1 00 |
| Beef for smoking, 100 lbs. at 3 cents, | 3 00 |
| Tallow, 150 lbs. at 6 cents, | 9 00 |
| | $16 00 |

No account is made in this computation of oil from the feet, or the grease and soup from the offal.

I have directed some new experiments to be made with six bullocks, to determine more definitely and satisfactorily the facts as communicated above. I hope to receive the results before this report is closed.

Several patents have been lately taken out to increase the facility of trying up cattle, sheep and hogs.

While on this subject it may not be amiss to add the experience of some excellent graziers as respects salting the cattle as a preventive to the murrain, as well as hastening the accumulation of fat. Whoever has noticed the salting of stock, must have been struck with the eagerness with which they rush for this luxury. The strong ones get a double portion, while many get none at all. The successful ones, however, in their strife, seize much more than is good for them, since an excess occasions excessive thirst. A remedy is found by saturating salt with water, and then adding clay or ashes to absorb the liquid; the residuum, after standing still a little while, becomes a hard mass susceptible of form. This is then conveyed, say in the form of a pyramid, to a convenient place—which should always be a dry place—for the stock to assemble at, and there protected by some covering from the rains.

To this pyramid give the cattle free access. Sheep will usually lick the salt-cake two or three times a day. None of the stock will take more than they want, and all will get enough. The experiment has been attended with the most favourable results.

In addition to the advantage of giving all the cattle such a supply of salt, it has been found that large herds have been saved entirely from the murrain. I would, therefore, recommend a trial, which can be easily made. If successful, the plan will save much labour and some danger. The following proportion will usually answer:

One part salt dissolved in two parts water; three and a half parts dry clay; three and a half parts of wood ashes.

The ashes and clay will help to keep the stomach and bowels in good order. This is the great preventive of the murrain, which is a highly excited inflammation of the intestines. The supposition that this disease arises from drinking in leeches, which subsequently find their way to the liver, is often believed, but is not tenable. The leech—if so it may be called—found on the liver, appears, upon microscopic investigation—indeed, also to the naked eye—to be a very different thing from the water leech; besides, if the leech proceeded from the stomach to the liver, such a breach would be made as to cause the speedy death of the animal; nor could the leech very pleasantly find its way through the gall-ducts. Be all this as it may, the experiment of salting in the mode prescribed is confidently recommended.—*Ellsworth's Report for* 1844.

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Drive your business—don't let your business drive you.

For the Farmers' Cabinet.

## Experiments in Farming.

The writer of this has derived instruction and interest from the perusal of the Cabinet for several years past, and though not depending on agriculture as his principal business, yet, having a small farm, has made some observations and experiments in that line. These may be worth one half the room they may take, if deemed worthy an insertion; their principal merit being that they are *facts;* a stubborn ingredient, difficult to be got over or around.

Conversing with farmers frequently many years since, I was struck forcibly with the opinion advanced by them all, without exception, that one load of barn-yard or stable manure, made, tramped in by the stock, and always under shelter, till time to haul it on the land, was worth at least two loads—some said three—of that made exposed to sun and rain, or without shelter; the question rushed to my mind at once, "if the difference is so great why do you not roof your yards, nearly or quite all over? it can be cheaply done; a roof of boards not necessarily water-tight, will answer every purpose, and pay you certainly not less than twenty per cent. clear, for your money;" a satisfactory reply was never obtained to the question.

Having occasion some years afterward to build a barn—my land having been limed and otherways improved, until I had not shelter for half the product—the idea of a roof over a more than usual portion of the yard, having obtained an immovable place in the mind was carried out, and the only regret about it is, that the plan was not laid for roofing a much greater quantity. Care is now generally taken several times during the winter, to sow about one bushel of plaster of paris at a time all over the manure, whether sheltered or not, at times when there is a thaw, or warm wet weather; a larger yard would require more plaster.

With me it is set down as bad economy of time to send my farming men to a distant part of the farm to work *before breakfast*, except to a suffering job, for the reason that almost every farmer can find suitable work near the buildings, or in the garden, and thus save the time spent in walking to and fro before the breakfast hour; hence part of our early hours are spent in putting under the shelter, wet dripping manure and straw, that has been exposed; its weight will pack it down sufficiently. After levelling it, plaster is sown, and there all lay together till immediately after harvest; it is then carted to the field, on oat or barley stubble, pre-

paratory to a crop of wheat: as soon as one or two days hauling is ahead, a careful man is employed to spread, having a bag or bucket by him with plaster of paris in, to sow a light coat over the square as soon as the heap of manure is carefully spread; several barrels containing plaster, being previously distributed over the field for the spreader to resort to, and the idea strongly impressed upon the man, that I would prefer to pay for two or three days extra labour if he will spend the time in spreading evenly, and parting and breaking all large pieces of the manure, instead of carelessly throwing it round, regardless where it falls, or how large the parts may be; my convictions are that much is lost to the crop by careless management of manure. After the spreading is finished, the field is shut up, and so left till near the time for sowing; it is then carefully ploughed, sowed and well harrowed, sometimes rolled immediately, and sometimes not till spring. Advantages of this whole plan are, first, that roofing a sufficient portion of the barn-yard, you can fodder your cattle in the dry, and they have their choice of shelter or the open air; second, your team will draw at least one-third more in value of manure at a load, there being not half so much water in it; third, an equal bulk—it being richer—will manure a larger space of ground; fourth, and most important, and caps all the others, a *uniformly good crop of fine heavy wheat, from land, not by any means the best of wheat land.* The first and only disadvantage is, a little more difficulty to get it spread evenly. I may remark that the *uniformly* good crop extended just as far over the fields as the manure—managed as above—reached; the remaining part of the fields having had the exposed or unsheltered manure put on them, though in greater weight, produced a crop of one-half to two-thirds in value. I am not chemist or philosopher of sufficient depth to account, by a long course of reasoning, for the result; I am satisfied to continue this plan till a better is learned; its cheapness commends it to me.

Another little experiment was made previous to the foregoing, and which is intended to be repeated, though on land somewhat different from that on which it was tried. Having had frequent occasion to travel, some years since, through parts of the best cultivated districts in Chester county, Pa., and some other places, I was occasionally, in fact frequently astonished, just before harvest to find the wheat crop an almost total failure, on lands well farmed and highly manured: it was truly sorrowful to see so much labour and value lost, so far as wheat was concerned, and the query arose strongly, can it be that so much more depends on the season being favourable, than on careful farming and high manuring; if it be so, why not put the manure on grass or corn ground, and plough down clover and other green crops in the fall, sow wheat, and depend for all the rest on the season? the manure will certainly pay in corn: and at it I went, on quite a small scale at first; thus, clover seed, sowed on wheat in the spring in the usual manner; after the wheat crop is removed at harvest, close up the field, suffering no stock to run on it, but permitting every thing to grow; about the first of September plough all down, turning under with a drag chain: this was followed up on the same ground five years in succession, without manure—results: first year, a very moderate crop; second year, a pretty good crop, equal to most of my neighbours, who had put on manure in the usual way, and better than some—third year, quite a good crop, fully equal to neighbouring farmers; here and there a few spots of green grass sod were observable, which put the wheat out where they obtained—fourth year, less wheat, and a much increased quantity of green grass—fifth year, very little wheat on a large part of the field, but the green grass had obtained a most astonishing hold; so long and tangled was it, that in many places a horse had not strength sufficient to pull the hay rake through it, and raking the stubble was abandoned in the part where the green grass had obtained. Such a result was, to say the least, not expected; that land which had been ploughed seven years in succession, should become almost matted with natural grass, as it is called, was certainly a curiosity. I say seven years successively, because a crop of corn and one of wheat, had been taken off before this experiment commenced.

This, if it has not already, may become dry and uninteresting if extended; it contains the essence of my experiments in obtaining crops of wheat; I therefore close.

J. P.

Newcastle co., Delaware.

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## Greatest amount of Produce from a given surface.

**The following is the twelfth of Liebig's *Familiar Letters on Chemistry*. The whole of those letters, as well as his Agricultural and Animal Chemistry, afford an amount of delightful reading for the farmer, which can hardly be obtained of the same kind, anywhere else for the same price.—Ed.**

Having occupied several letters with the attempt to unravel, by means of chemistry, some of the most curious functions of the

animal body, and, as I hope, made clear the distinctions between the two kinds of constituent elements in food, and the purposes they severally subserve in sustaining life, let me now direct attention to a scarcely less interesting and equally important subject—the means of obtaining from a given surface of the earth, the largest amount of produce adapted to the food of man and animals.

Agriculture is both a science and an art. The knowledge of all the conditions of the life of vegetables, the origin of their elements, and the sources of their nourishment, forms its scientific basis.

From this knowledge we derive certain rules for the exercise of the *art*, the principles upon which the mechanical operations of farming depend, the usefulness or necessity of these for preparing the soil to support the growth of plants, and for removing every obnoxious influence. No experience, drawn from the exercise of the art, can be opposed to true scientific principles, because the latter should include all the results of practical operations, and are in some instances solely derived therefrom. Theory must correspond with experience, because it is nothing more than the reduction of a series of phenomena to their last cause.

A field in which we cultivate the same plant for several successive years, becomes barren for that plant in a period varying with the nature of the soil: in one field it will be in three, in another in seven, in a third in twenty, in a fourth in a hundred years. One field bears wheat, and no peas; another beans and turnips, but no tobacco: a third gives a plentiful crop of turnips, but will not bear clover. What is the reason that a field loses its fertility for one plant, the same which at first flourished there? What is the reason one kind of plant succeeds in a field where another fails?

*These questions belong to science.*

What means are necessary to preserve to a field its fertility for one and the same plant?—what to render one field fertile for two, for three, for all plants?

*These last questions are put by art, but they cannot be answered by art.*

If a farmer, without the guidance of just scientific principles, is trying experiments to render a field fertile for a plant which it otherwise will not bear, his prospect of success is very small. Thousands of farmers try such experiments in various directions, the result of which is a mass of practical experience forming a method of cultivation which accomplishes the desired end for certain places; but the same method frequently does not succeed—it indeed ceases to be applicable to a second or third place in the immediate neighbourhood. How large a capital, and how much power, are wasted in these experiments! Very different, and far more secure, is the path indicated by science; it exposes us to no danger of failing, but, on the contrary, it furnishes us with every guarantee of success. If the cause of failure—of barrenness in the soil for one or two plants—has been discovered, means to remedy it may readily be found.

The most exact observations prove that the method of cultivation must vary with the geognostical condition of the subsoil. In basalt, greywacke, porphyry, sandstone, limestone, &c., are certain elements indispensable to the growth of plants, and the presence of which renders them fertile. This fully explains the difference in the necessary methods of culture for different places; since it is obvious that the essential elements of the soil must vary with the varieties of composition of the rocks, from the disintegration of which they originated.

Wheat, clover, turnips, for example, each require certain elements from the soil; they will not flourish where the appropriate elements are absent. Science teaches us what elements are essential to every species of plants by an analysis of their ashes. If, therefore, a soil is found wanting in any of those elements, we discover at once the cause of its barrenness, and its removal may now be readily accomplished.

The empiric attributes all his success to the mechanical operations of agriculture: he experiences and recognises their value, without inquiring what are the causes of their utility, their mode of action: and yet this scientific knowledge is of the highest importance for regulating the application of power and the expenditure of capital—for insuring its economical expenditure and the prevention of waste. Can it be imagined that the mere passing of the ploughshare or the harrow through the soil—the mere contact of the iron—can impart fertility miraculously? Nobody, perhaps, seriously entertains such an opinion. Nevertheless, the *modus operandi* of these mechanical operations is by no means generally understood. The fact is quite certain, that careful ploughing exerts the most favourable influence; the surface is thus mechanically divided, changed, increased, and renovated; but the ploughing is only auxiliary to the end sought.

In the effects of time, in what in agriculture are technically called *fallows*—the repose of the fields—we recognise by science certain chemical actions, which are continually exercised by the elements of the atmos-

phere upon the whole surface of our globe. By the action of its oxygen and its carbonic acid, aided by water, rain, changes of temperature, &c., certain elementary constituents of rocks, or of their ruins, which form the soil capable of cultivation, are rendered soluble in water, and consequently become separable from all their insoluble parts.

These chemical actions, poetically denominated "the tooth of time," destroy all the works of man, and gradually reduce the hardest rocks to the condition of dust. By their influence the necessary elements of the soil become fitted for assimilation by plants; and it is precisely the end which is obtained by the mechanical operations of farming. They accelerate the decomposition of the soil, in order to provide a new generation of plants with the necessary elements in a condition favourable to their assimilation. It is obvious that the rapidity of the decomposition of a solid body must increase with the extension of its surface; the more points of contact we offer in a given time to the external chemical agent, the more rapid will be its action.

The chemist, in order to prepare a mineral for analysis, to decompose it, or to increase the solubility of its elements, proceeds in the same way as the farmer deals with his fields—he spares no labour in order to reduce it to the finest powder; he separates the impalpable from the coarser parts by washing, and repeats his mechanical bruising and trituration, being assured his whole process will fail if he is inattentive to this essential and preliminary part of it.

The influence which the increase of surface exercises upon the disintegration of rocks, and upon the chemical action of air and moisture, is strikingly illustrated upon a large scale in the operations pursued in the gold mines of Yaquil, in Chili. These are described in a very interesting manner by Darwin. The rock containing the gold ore is pounded by mills into the finest powder; this is subjected to washing, which separates the lighter particles from the metallic; the gold sinks to the bottom, while a stream of water carries away the lighter earthy parts into ponds, where it subsides to the bottom as mud. When this deposit has gradually filled up the pond, this mud is taken out and piled in heaps, and left exposed to the action of the atmosphere and moisture. The washing completely removes all the soluble part of the disintegrated rock; the insoluble part, moreover, cannot undergo any further change while it is covered with water, and so excluded from the influence of the atmosphere at the bottom of the pond. But being exposed at once to the air and moisture, a powerful chemical action takes place in the whole mass, which becomes indicated by an efflorescence of salts covering the whole surface of the heaps in considerable quantity. After being exposed for two or three years, the mud is again subjected to the same process of washing, and a considerable quantity of gold is obtained, this having been separated by the chemical process of decomposition in the mass. The exposure and washing of the same mud is repeated six or seven times, and at every washing it furnishes a new quantity of gold, although its amount diminishes every time.

Precisely similar is the chemical action which takes place in the soil of our fields; and we accelerate and increase it by the mechanical operations of agriculture. By these we sever and extend the surface, and endeavour to make every atom of the soil accessible to the action of the carbonic acid and oxygen of the atmosphere. We thus produce a stock of soluble mineral substances, which serve as nourishment to a new generation of plants, and which are indispensable to their growth and prosperity.

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## Fecundity of Hens.

**We take the following from Bement's American Poulterer's Companion, a work of which we have heretofore spoken, and of which all our housewives who would be successful with their poultry, should possess themselves.—Ed.**

The question is often asked "why hens cannot be made to lay as well in the winter as in the summer?" They can, to a certain extent; but they require as a condition, that they be well provided with warm and comfortable lodging, clean apartments, plenty of food, in all its variety, consisting of grain, vegetable and animal food, pure water, and gravel, lime, and sand to roll and bask in.

A writer in the Southern Agriculturist says: "To make hens lay in winter, they should be shut up in a warm place. Boiled potatoes, turnips, carrots and parsnips, are cheap and good food," &c.

"The reason why hens do not lay in winter," observes a writer in the New England Farmer, "is because the earth is covered with snow so that they can find no ground or other calcareous matter to form the shells. If the bones of meat or poultry be pounded and given to them, either mixed with their food, or by itself, they will eat greedily, and lay eggs as well as in warm weather. When hens are fed on oats, they lay better than when fed on any other grain."

There seem naturally to be two seasons of the year when hens lay; early in the spring, and afterwards in summer: indi-

cating that if fowls were left to themselves, they would, like wild birds, produce two broods in a year.

Spring-hatched birds, if kept in a warm place and fed plentifully and attended to, will generally commence laying about Christmas, or even somewhat earlier. In cold and damp this is not to be expected, and much may, in different seasons, depend on the state of the weather and the condition of the bird.

It is a well known fact, that from November to February,—the very time we are in want of eggs the most—they are to many a bill of expense, without any profit. To promote fecundity and great laying in the hen, it is necessary that they be well fed on grain, boiled potatoes given to them *warm*, and occasionally animal food. In the summer they get their supply of animal food, in the form of worms and insects, when suffered to run at large; unless their number is so great as to consume beyond the supply in their roving distance. I find it quite advantageous, in the summer, to open my gates occasionally, and give my fowls a run in the garden and field adjoining their yard, for a few hours in the day, when grasshoppers and other insects are plenty. I had two objects in view; one to benefit the fowls, the other to destroy the insects. It will be found that the fecundity of the hen will be increased or diminished, according to the supply of animal food furnished.

Hens moult and cast their feathers once every year, which generally commences in August, and lasts until late in November. It is the approach, the duration and the consequences of this period, which put a stop to their laying. It is a critical time for all birds. All the period while it lasts, even to the time that the last feathers are replaced by new ones, till these are full grown, the wasting of the nutritive juices, prepared from the blood for the very purpose of promoting this growth, is considerable; and hence it is no wonder there should not remain enough in the body of the hen to cause her egg to grow.

Old hens cannot always be depended on for eggs in winter, they scarcely being in full feather before the last of December; and then, probably, may not begin to lay till March or April, producing not more than twenty or thirty eggs; and this is probably the cause of the disappointment of those who have supplied themselves at the markets for their stock to commence with, and get but few or no eggs. As pullets do not moult the first year, they commence laying before the older hens, and by attending to the period of hatching, eggs may be produced during the year. An early brood of chickens, therefore, by being carefully sheltered from the cold and wet, and fed once a day on boiled potatoes, *warm*, with plenty of grain, in the feeding hoppers, and occasionally a little animal food, will begin to lay in the fall, or early in the winter.

"When," says Bosc, "it is wished to have eggs during the cold season, even in the dead of winter, it is necessary to make the fowls roost over an oven, in a stable, or to erect a stove in the poultry-house on purpose. By such methods the farmers of Auge have chickens fit for the table in the month of April, a period when they are only beginning to be hatched on the farms around Paris, although farther to the south. It would be desirable to have stoves more common in poultry-houses near cities, where luxury grudges no expense for the convenience of having fresh eggs."

A writer in the Cultivator, under the signature of B., says, "I never allow cocks to run with my hens, except when I want to raise chickens." He recommends giving them fresh meat chopped fine, once a day; never allowing any eggs to remain in the nest, for nest eggs. "My hens," continues the writer, "always lay all winter, and from 75 to 100 eggs each, in succession. There being nothing to excite the animal passions, they never attempt to sit. I have for several years reduced my theory to practice, and proved its entire correctness. It must be obvious that the presence of the male is *not* necessary for the production of eggs, as they are formed whether the male be present or not. Of course such eggs will not produce chickens."

In contradiction to the foregoing, Boswell says, "To promote fecundity and great laying in the hen, nothing more is necessary than the best corn and fair water; but malted or sprouted barley has occasionally a good effect, whilst the hens are kept on solid corn, but if continued too long they are apt to scour. It must be noted, that nothing is more necessary towards success in the particular of obtaining plenty of eggs, than a good attendance of cocks, especially in the cold season; and it is also especially to be observed, that a cock while moulting is generally useless."

"Man," says Parmentier, "who thinks of nothing but his own interest, has attempted several means of arousing hens from their torpidity, when they cease at the natural period of the year to lay, inasmuch as it seems very hard to pass through the winter without the luxury of eating new laid eggs."

The method adopted by the ancients was,

rich and stimulant food, such as toasted bread soaked in ale or wine, barley half sodden, tares and millet.

M. Reaumur made several experiments with a view to the object in question. A certain class of food, and of seeds, he says, are much extolled in many places, as tending to promote the laying of eggs, but nothing has yet been determined by our choice; for in this way, the sum of the eggs laid by the hens of a poultry-yard, might be distributed in a far more equable manner, over the several months of the year: and if, as is probable, each hen can only produce a certain number of eggs, we should be glad to have a portion of them yearly produced in winter. The necessity we are under of keeping great quantities of eggs in the season when they are laid, causes an uncommon quantity to be spoiled every year, from too long keeping or want of proper caution in preserving them; and hence the importance of the question—"Whether it may not be possible to make hens lay in winter?"

With respect to fecundity, some hens will lay only one egg in three days, some every other day, others every day, and a hen was exhibited at the Fair of the American Institute, at New York, in October, 1843, that was said to have laid two eggs in a day, and Aristotle mentions a breed of Ilyssian hens, which laid as often as thrice a day.

According to our experience much depends on circumstances, such as climate, accommodations, feed, and the attention paid to the hens, as to the number of eggs annually produced. It is asserted by Buffon, that a hen, well fed and attended, will produce upwards of 150 eggs a year, besides two broods of chickens; and a writer in the Connecticut Courant, says, "a dozen hens properly attended, will furnish a family with more than 2,000 eggs in a year, and 100 chickens," but from our experience we think this an over-estimate, especially for this cold climate. From 70 to 75 eggs per hen, a year, would be a fair estimate, for any number of fowls kept together.

We find statements from practical writers recorded in our American journals, several instances of extraordinary products of hens, which will enable us to form some judgment on the subject; but it must be borne in mind, however, that these statements have been given generally as extraordinary products.

Mr. E. A. Colman, of Chelsea, Mass., obtained from eight hens, from July 7th to August 29th, seven weeks, 293 eggs.

The editor of the Newburyport Herald gives an account of an experiment made with ten hens, which produced 1,116 eggs, besides 15 chickens, within the year. The avails of 41 dozen eggs sold, paid all the expense of keeping.

It is stated in the Farmer's Journal, that from 150 hens, 1,900 eggs were obtained in the month of January; and that five pullets produced 300 eggs from the middle of October to the middle of April, which is the coldest part of the year.

"Mr. E. Tucker, of Milton," says the editor of the Massachusetts Ploughman, "tells us that he obtained 600 dozen—7,200 eggs in one year, from 83 hens; this was his highest number of fowls; he sometimes had less; that for 562 dozen—6,744—he took $100 within one cent. The whole amount of his cash expenditures was $56 43, leaving him a balance of $43 57."

Mr. Westfall, of Rhinebeck, in the Cultivator, says, "From 45 hens, I have the past year, 1840, raised more than 150 chickens, although I had rather poor success in hatching the eggs. I have sold eggs to the amount of $21 29: have now over 300 on hand, and the year since the receipt of the first egg last spring, will not be up till the last of this month, February, and we are now getting from 20 to 25 eggs per day, from about 80 hens."

A writer in the Cultivator of 1842, says, "This year, 1842, I have about 40 hens, mostly pullets, and three cocks. They commenced laying in the latter part of January, and, up to the last of April, about 90 days, have given me about 120 dozen—1,440 eggs."

A correspondent in the Cultivator, who writes more in detail, says, "that when his fowls commenced laying he had 37 hens and three cocks, and when they ceased laying he had 26, the average being 32. In about 300 days, between January and November, they yielded 3,298 eggs." He raised no chickens.

The following remarkable instance of fecundity is furnished by Mr. Morent, in the Cultivator. He had three pullets of the Poland or top-knot variety, which were hatched in June. December the 15th of the same year, they began to lay, and from that time to December following, laid 524 eggs. Cost of keeping not exceeding $3 71. They were fed on barley, rice and peas.

A correspondent of the Massachusetts Ploughman, gives a most extraordinary account of the sales from the produce of one hen, amounting to the sum of $18.

The following singular case is related in an English publication. "Mr. James Drinkwater, of Harpenbery, has a hen two years old; it has not a white feather on it, but is as black as jet. For upwards of eighteen months it has laid an egg every other day,

and has never been known to change its feathers."

A friend living on Staten Island, and who has been pretty successful in the management of poultry, informed me that from 55 hens and 7 ducks, he obtained in the months of January, 1842, 182 eggs—in February, 324—March, 792—April, 878—May, 915—June, 746—July, 534—August, 650—September, 346—October, 68—November, 5—December, 69—making in all for the year 5,509. Allowing the seven ducks to have laid 70 eggs each, would leave 5,019, which divided by 55, gives an average of 91 eggs to each hen. These hens were fed from six to eight quarts of cracked corn per day, and occasionally a few boiled potatoes. Averaging the feed at seven quarts per day, we have within a fraction of 80 bushels of corn, which at 50 cents per bushel, amounts to $40, and allowing the eggs to be worth $1 per 100, we have $55 09, from which deduct $40 for food, and we have a profit of only $15 09, besides 60 chickens, which, at 15 cents each, would swell the profits up to $24 09. He gives the preference, for eggs, to the silver top-knots and French hens.

Another friend who resides in a neighbouring city, and keeps between 30 and 40 hens, informed me that, in 1841, he obtained eggs from his hens throughout the year; that is, there was not a single day in which he did not obtain some. This he accounted for by having very early chickens, as when the old hens ceased laying to moult, the young pullets commenced. In 1842, he kept between 25 and 30 hens, and obtained 2,832 eggs. This, it will be seen, gives a fraction over 94 eggs to each hen, which is nearly double the number we obtained from our hens. His yard is completely protected by high fences and buildings on the north and west, and receiving the full influence of the sun from the south. He has low sheds around the yard to protect them from storms in the day, and a warm room in the loft of his wood-house, which is lathed and plastered, to protect them from vermin, and keep them warm in cold weather.

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Communicated for the Farmers' Cabinet.

## American Agricultural Association of New York—Report on Guano.

"Resolved, That the Association cause an analysis to be made of the cargoes of guano from Ichaboe and Peru, now in the market for the use of members and all persons in the neighbourhood; and that a report be drawn up with the analysis, containing suggestions for the application of the manure; the whole to be published as early as practicable, in the agricultural papers of this city and vicinity."

*Peruvian Guano.*—The specimen was obtained from Mr. Allen, 205 Broadway, who is an agent for the sale of it.

| | |
|---|---|
| Uric acid | 10.5 |
| Ammonia | 19.0 |
| Phosphoric acid | 14.0 |
| Lime and magnesia | 16.0 |
| Salts of soda and potash | 6.0 |
| Oxalic acid, with carbonic and muriatic acids | 13.0 |
| Water | 13.0 |
| Sand | 2.0 |
| Volatile and organic matters | 6.5 |
| | 100.00 |

*Ichaboe Guano.*—The specimen was obtained from Mr. Irvine, Front street, and is a fair sample.

| | |
|---|---|
| Ammonia | 13.5 |
| Humic acid | 4.0 |
| Phosphates | 25.0 |
| Oxalic, &c., acids | 20.0 |
| Salts of soda, &c. | 7.0 |
| Water and volatile matter | 27.5 |
| Sand | 3.0 |
| | 100.00 |

*Prices and relative value of the Peruvian and African Guano.*—These specimens are both very fair, and represent the peculiarities of the two kinds of guano. The absence of uric acid in the African variety, is the cause of its inferiority; for that body decaying gradually in the soil, continues to yield carbonate of ammonia for a long time, so that the stimulating effects of the guano are seen the next year, while the African is more fleeting. The prices of the two are, for Peruvian $45, and for African $35 per ton, for quantities amounting to five tons; and this may be considered, all things being taken into the account, a fair representation of their value in agriculture.

The African being soluble to the extent of 40 per cent., is better adapted for watering plants, and where very rapid growth is wanted. The Peruvian, on the other hand, acts for a longer time, and is better calculated for crops which continue to grow vigorously during many weeks. The two will probably produce very similar effects for one crop; but the Peruvian is much more active on the second crop.

*Crops to which it is applied.*—It is hardly necessary to state, that the application may be made to every crop, for experiments are already multiplied with nearly every com-

mon plant or tree: to enumerate a few is sufficient. Wheat, corn, grass, the cerealia, sugar-cane, tobacco, apple, pear, and other fruit trees, flowers, cabbages, turnips, and other cruciferous plants; the experiments are fewest on leguminous plants. But the effect of guano will not be equal on all; for those plants requiring most stable manure, such as tobacco, turnips and corn, are more benefited than grass, oats, or such as require less—the chief effect of the manure being due to the quantity of the ammonia it contains. The reason guano is serviceable to all plants, arises from its containing every saline and organic matter they require as food.

*Kinds of soil to which it may be applied.*—It has been used beneficially on all soils; for as it contains every element necessary to plants, it is independent of the quality of the soil—*one great point* being attended to, that the land be in *good tilth;* for, otherwise, the tender roots of the vegetable find an obstruction to free growth, and are crippled. Poor, well-tilled soils, exhibit most increase by guano, for in them some essential to the growth of plants is more likely to be absent.

*Amount to be applied.*—On wheat 250 lbs. per acre, will be an average for a fair soil; 300 lbs. for one that is poor, and 200 for a good soil. Corn, potatoes, turnips, cabbages and garden vegetables, will require 300 lbs. in fair lands; but the amount may be diminished by 50 lbs., if two applications are made instead of one. For grass, rye, and oats, 200 lbs. will be enough.

*Time and mode of application.*—Seeds may be prepared by soaking in a solution of two lbs. of guano to the gallon of water, and this will answer for a first manuring, if they are left sufficiently long to exhibit signs of germination. Wheat and other small grains should be steeped in this solution about sixty hours, corn about one hundred hours. Thus steeped, the seeds of smut will also be destroyed. Half the quantity to the acre to be applied when the plant has fairly started, and is in second leaf. By this timely addition, the effects of many insects are avoided, and the seedling at once takes on a robust habit. The remaining half should be applied to the small grain crops when they are throwing out new stems, or tillering; to corn, as the tassel appears, or at the second hoeing, and so with other hoed crops. This application should be made, therefore, at the latest period of working, and as nearly before flowering as practicable. The guano should be sowed with a mixture of fine soil, gypsum or charcoal, to give it bulk and divide the particles. No lumps should be thrown amongst the plants, for they burn them; and where an extensive application is to be made, it is better to screen the manure and pound the lumps. In sowing, reach the soil, if possible, for it is unserviceable to sprinkle it on the plants, and frequently destroys them. Select a season when the land is wet or moist, or when rain may be expected; for in dry weather the guano does not answer well, or even does injury, by acting as a caustic on vegetation. But if the crop suits, always prefer manuring the plant or hill; do this whilst hoeing; less guano is thus used, and more certain effects result. One table spoonful to the hill of corn, tobacco, potatoes, &c., is an abundance for each application. If a solution be preferred, mix one pound in ten gallons of water, and water sparingly with this on the soil, and not *on the plants*, at the times before mentioned, taking care to stir up the insoluble portion when applied. For this purpose the African variety will be most suitable. Or, where rapid growth is wanted, irrespective of seed, the clear solution may be applied; the insoluble matter, phosphates, &c., being reserved for wheat and corn. Guano may be composted with common soil, or anything but *lime* and *unleached ashes;* for these liberate the free ammonia, and thus diminish the effects of the manure.

*Value, compared with other manures.*—So far as the experiments in England and Scotland may be adduced, one cwt. of guano is equal to about five tons of farm-yard manure on an average; but it is much higher for turnips than for grass, &c. It would be advisable that in the very different climate of the United States, comparative experiments be made on this point. Let twenty single cart loads of stable manure be used per acre, on wheat, corn, &c., and contrasted with four cwt. of guano. It would also be of service to the agricultural world, that some experiments were made on the value of the organic and inorganic portions of guano. A plot of ground eight square yards, may be divided into two parts, half manured with the ordinary guano, and half with the ashes remaining after burning. In this way the proportionate effect of the organic and saline parts would be estimated, and the conclusion be serviceable, insomuch as the saline matters can be mixed into a compost for a trifling sum, and thus the expense of guano avoided.

D. P. Gardner, M. D.

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Persevere against discouragements. Let obstructions only stimulate to increased exertion.

## The Cattle Epidemic.

This pestilence is beginning to excite much apprehension in Great Britain, so much so as to be taken up by the Highland Agricultural Society of Scotland, and several of the Agricultural Protection Societies. At the meeting of the Highland Society last week, Professor Low said:

"The members were all, no doubt, aware that there at present prevailed an epidemic on the continent amongst cattle. He believed it originated in the marshy swamps of Hungary; but it was steadily and rapidly extending northward. The opinion of medical men was, that the disease was contagious: and he thought it was safest to act upon the supposition. The French Government had been eagerly urged to take some precautions to prevent the admittance of these animals. He thought, therefore, that the Directors should apply to the Board of Trade, that, if necessary, they might suspend the operation of that portion of the tariff which refers to the importation of German cattle, so long as the epidemic continues. This would be no injury to the consumer, as the quantity of cattle hitherto imported had been very small, while the injury which might be inflicted by the importation of diseased cattle, would be enormous."

The following extract is from the report read at the annual meeting of the Sussex Agricultural Protection Society:

"Your committee have lately had brought before their notice, the fact of a most fatal disease raging among the cattle on some parts of the continent, and your committee have taken measures that the existence of such malady should be brought before the notice of the Board of Trade, with the view that that Board should take such steps as to prevent the landing of cattle so diseased."

It is to be hoped that while this epidemic shall prevail on the continent of Europe, no importations of cattle or stock of any kind will be made into our country.—*American Farmer.*

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## Useful Directions.

Britannia ware should be first rubbed gently with a woollen cloth and sweet oil, then washed in warm suds and rubbed with soft leather and whiting. Thus treated it will retain its beauty to the last.

New iron should be very gradually heated at first; after it has become inured to the heat, it is not as likely to crack.

It is a good plan to put new earthen ware into cold water, and let it heat gradually until it boils—then cool again. Brown earthen ware, particularly, may be toughened in this way. A handful of rye or wheat bran thrown in while it is boiling, will preserve the glazing, so that it will not be destroyed by acid or salt.

The oftener carpets are shaken the longer they will wear; the dirt that collects under them grinds out the threads.

If you wish to preserve fine teeth, always clean them thoroughly after you have eaten your last meal at night.

Woollens should be washed in very hot suds and not rinsed. Luke-warm water shrinks them.

Suet keeps good all the year round, if chopped and packed in a stone jar, and covered with molasses.

When molasses is used in cooking, it is a prodigious improvement to boil and skim it before you use it. It takes out the unpleasant raw taste, and makes it almost as good as sugar.

Use hard soap to wash your clothes, and soft to wash your floors. Soft soap is so slippery that it wastes a good deal in washing clothes.

It is easy to have a supply of horse-radish all winter. Have a quantity grated while the root is in perfection, put it in bottles, fill it with vinegar, and keep it corked tight.

Do not wrap knives and forks in woollens; wrap them in good strong paper. Steel is injured by lying in woollens.—*American Traveller.*

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From the Massachusetts Ploughman.

## Oats--Eighty bushels per acre.

Mr. Editor,—If you think the following, in relation to a crop of oats I raised the past season will be interesting to your readers, it is at your disposal.

I sowed four acres with oats last spring, which had been planted two years previous with corn, and well manured. The yield was eighty bushels to the acre, the oats weighing thirty-five lbs. to the bushel. I procured my seed about forty miles distant, and sowed five bushels to the acre. I attribute the superiority of my crops to the changing of seed, more than to any other one circumstance. Would not our farmers find it to their advantage to take more pains than they ordinarily do to obtain their seed oats from soils different from those which they sow?

I ploughed in the stubble, seeded and rolled the ground immediately after taking off the crop. The grass seed took well and looked promising at the closing in of winter.

D. A.

Ashfield, Feb. 11th, 1845.

## Rich Milk.

No error can be greater than that of believing a cow can give rich milk upon a poor, lean, spare diet. There must be in the food that which will supply the materials or ingredients of which milk is composed, or else it must be impossible for the cow to produce it. The better the food, the better and richer the milk—the larger quantity of cream, and the supply of butter made from it. Many of our own cows, and most of the imported specimens, whose surprising products have been spread before us in our agricultural papers and reports, have had the advantages of great care and abundant and rich feeding, either of the pasture or the stall. It could not have been otherwise; the effects only followed known causes.

Great difference exists in cattle; some cows run to fat, and those are apt to be spare milkers; the lean and well formed are apt to be good ones; some digest the food better than others, and these do better upon the same pasture or quantity of food; some feed faster and more constantly, and these are apt to be the best milkers, which run with others upon the same pasture. There appears to be as much diversity among cattle in these particulars as among men and women, who may daily sit together around the same table.

The milk-men can now reside thirty or forty miles from Boston, and have their milk fresh and warm from the cow in two hours or less in the dwelling of the consumer. The farmer finds a new source of income in his milk, and as the supply is more abundant, the citizen of Boston has it good; he no longer suspects that it has been diluted with water. There is enough of good milk to supply the demand, and bad would find no customers. Town and city families no longer jar in consequence of trading in cows; and they can much quicker, and oftener than formerly visit by means of the rail-roads, their country friends, without those unpleasant comparisons between city and country cream and butter.—*Farmers' Monthly Visitor.*

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## Tabular Estimate of Crops for 1844.

In the eleventh No. of our last volume, will be found estimates of the crops in the United States in the year 1843, from the Report of the Commissioner of Patents at Washington. We now give from the same source, those for the past year. These are highly interesting to farmers, and afford, at a glance, not only the aggregate of our great staple crops, but also the produce of the individual States. By comparing the tables for 1843, with those annexed, it will be observed that the crop of corn throughout the country for the past year, appears to have been more than 70,000,000 of bushels short of that of the preceding one, and that the crop of wheat was nearly 5,000,000 of bushels less. While the produce of these grains in some States was less in the last year than in the preceding one, others, however, have considerably increased their amounts. In 1843, in the amount of corn raised, the six following States stood in the following order: Tennessee, Kentucky, Virginia, Ohio, Indiana, Illinois. In 1844, the six heaviest corn producers stand as follow: Tennessee, Ohio, Kentucky, Virginia, Indiana, North Carolina. The six States, which in 1843 produced the greatest amount of wheat, stood in the following order: Ohio, New York, Pennsylvania, Virginia, Indiana, Tennessee; in 1844, they stand as follow: Ohio, New York, Virginia, Pennsylvania, Tennessee, Indiana. Louisiana in 1843, produced but 97,000,000 lbs. of sugar, while in 1844, her produce was raised to 160,000,000; and what is not a little remarkable, New York is the next heaviest sugar producer. While Connecticut produces almost as much silk as all the other States put together, Georgia, Mississippi, Louisiana and Alabama, are far the heaviest cotton growers. Kentucky and Virginia are the great tobacco States. New York, Pennsylvania, Ohio and Virginia, have the greatest population. New York may well be called the Empire State, as she now numbers almost as many souls as did the whole "thirteen" at the time of the Revolution.

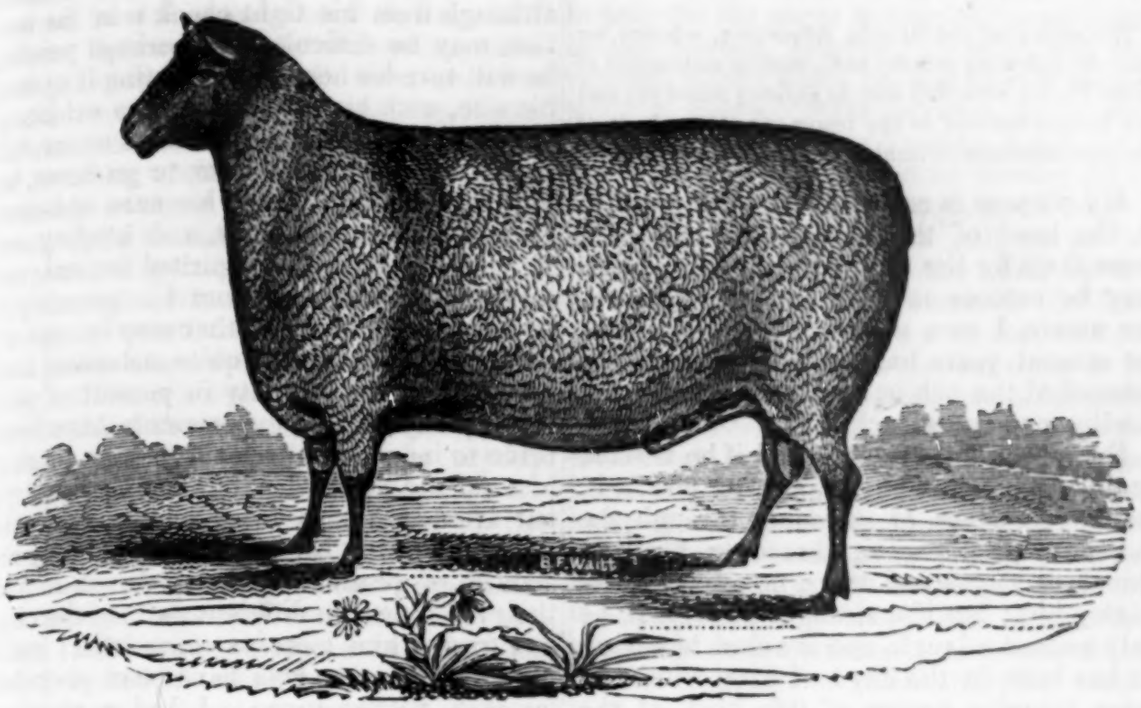
While the population of every State is steadily on the increase, we find that the facilities for procuring a comfortable subsistence are also continually multiplied. We have still, vast territories of unimproved land, inviting to their occupancy the hardy and enterprising of our citizens, whose capital is limited, and who would themselves lay a foundation for the wealth, and more easy situation of their children. It is by no means in an improved cultivation of the soil alone that our advancement is to be perceived. The productions of our mechanics and manufacturers will bear comparison with the very best of any country; and the general diffusion of these improvements, leads, it is to be hoped, to a general increase of the *common comfort*. "There is a beautiful connection," says the Report, "between the progress of the mechanic arts and the developement of the natural productions of the soil. The genius which puts into the hands of the Agriculturist the machine by which he may plough, mow, reap, thresh, or shell out ten times the usual amount performed by the same number of individuals, of course is gifting him with increased power of turning his labour to advantage, provided the market keeps pace with such advance of product. The same may be said with respect to the great fertility secured by different compounds, which, by the aid of chemistry, have been applied to the soil." As information becomes more generally diffused, and the minds of the farming community more thoroughly set into action, we believe the apparent comfort of all may be promoted, and long periods elapse before the onward march of our country shall have reached the goal towards which it would seem to be aiming.—ED.

TABULAR ESTIMATE OF THE CROPS FOR 1844.

| *State or Territory.* | *Population in 1840.* | *Present estimated popu'n.* | *Wheat.* | *Barley.* | *Oats.* | *Rye.* | *Buckwheat.* | *Indian corn.* |
|---|---|---|---|---|---|---|---|---|
| | | | *Bushels.* | *Bushels.* | *Bushels.* | *Bushels.* | *Bushels.* | *Bushels.* |
| Maine - - - - | 501,973 | 555,525 | 628,000 | 260,000 | 1,422,000 | 176,000 | 66,000 | 1,738,000 |
| New Hampshire - - | 284,574 | 289,368 | 588,000 | 117,000 | 1,765,000 | 405,000 | 147,000 | 1,662,000 |
| Massachusetts - - | 737,699 | 803,187 | 210,000 | 141,000 | 1,687,000 | 660,000 | 114,000 | 2,816,000 |
| Rhode Island - - | 108,830 | 115,033 | 4,000 | 49,000 | 182,000 | 49,000 | 4,000 | 636,000 |
| Connecticut - - - | 309,978 | 316,543 | 104,000 | 25,000 | 1,496,000 | 1,122,000 | 404,000 | 2,408,000 |
| Vermont - - - | 291,948 | 297,166 | 776,000 | 49,000 | 3,266,000 | 306,000 | 286,000 | 1,440,000 |
| New York - - - | 2,428,921 | 2,714,486 | 14,975,000 | 2,164,000 | 31,135,000 | 4,044,000 | 2,997,000 | 19,468,000 |
| New Jersey - - - | 373,306 | 401,295 | 875,000 | 10,000 | 4,271,000 | 2,569,000 | 818,000 | 6,966,000 |
| Pennsylvania - - | 1,724,033 | 1,924,460 | 10,483,000 | 157,000 | 24,783,000 | 10,373,000 | 2,889,000 | 19,029,000 |
| Delaware - - - | 78,085 | 78,527 | 367,000 | 5,000 | 1,035,000 | 46,000 | 12,000 | 3,014,000 |
| Maryland - - - | 470,019 | 482,256 | 4,070,000 | 3,000 | 2,254,000 | 858,000 | 99,000 | 4,653,000 |
| Virginia - - - | 1,239,797 | 1,254,938 | 10,805,000 | 94,000 | 14,812,000 | 1,310,000 | — | 38,960,000 |
| North Carolina - - | 753,419 | 761,648 | 2,461,000 | 4,000 | 5,346,000 | 255,000 | — | 22,330,000 |
| South Carolina - - | 594,398 | 606,285 | 1,460,000 | 4,000 | 1,400,000 | 60,000 | — | 13,640,000 |
| Georgia - - - | 691,392 | 891,642 | 1,848,000 | 13,000 | 1,190,000 | 80,000 | — | 22,200,000 |
| Alabama - - - | 590,756 | 657,000 | 1,088,000 | 8,000 | 1,909,000 | 72,000 | — | 22,200,000 |
| Mississippi - - - | 375,651 | 556,467 | 344,000 | 2,000 | 1,081,000 | 20,000 | — | 2,709,000 |
| Louisiana - - - | 352,411 | 426,160 | — | — | 138,000 | 2,000 | — | 7,600,000 |
| Tennessee - - - | 829,210 | 907,770 | 6,950,000 | 5,000 | 7,841,000 | 366,000 | 25,000 | 61,100,000 |
| Kentucky - - - | 779,828 | 828,846 | 3,974,000 | 14,000 | 11,901,000 | 2,316,000 | 13,000 | 47,500,000 |
| Ohio - - - - | 1,519,467 | 1,834,965 | 15,969,000 | 191,000 | 20,393,000 | 840,000 | 792,000 | 48,000,000 |
| Indiana - - - | 685,866 | 868,175 | 5,419,000 | 32,000 | 11,585,000 | 210,000 | 66,000 | 24,500,000 |
| Illinois - - - | 476,183 | 764,809 | 3,380,000 | 92,000 | 10,798,000 | 136,000 | 86,000 | 19,680,000 |
| Missouri - - - | 383,102 | 514,000 | 1,144,000 | 10,000 | 4,555,000 | 77,000 | 17,000 | 12,500,000 |
| Arkansas - - - | 97,574 | 133,403 | 2,111,000 | 1,000 | 396,000 | 11,000 | — | 7,500,000 |
| Michigan - - - | 212,267 | 308,437 | 4,237,000 | 158,000 | 4,013,000 | 70,000 | 200,000 | 4,300,000 |
| Florida - - - | 54,477 | 65,005 | 1,000 | — | 10,000 | — | — | 1,100,000 |
| Wisconsin - - - | 30,945 | 52,379 | 728,000 | 17,000 | 1,000,000 | 4,000 | 23,000 | 560,000 |
| Iowa - - - - | 43,112 | 90,000 | 595,000 | 2,000 | 568,000 | 7,000 | 13,000 | 1,690,000 |
| District of Columbia | 43,712 | 52,421 | 13,000 | — | 15,000 | 6,000 | — | 44,000 |
| | 17,069,453 | 19,552,196 | 95,607,000 | 3,627,000 | 172,247,000 | 26,450,000 | 9,071,000 | 421,953,000 |

TABULAR ESTIMATE OF THE CROPS FOR 1844—CONTINUED.

| State or Territory. | Potatoes. | Hay. | Flax and Hemp. | Tobacco. | Cotton. | Rice. | Silk. | Sugar. |
|---|---|---|---|---|---|---|---|---|
| | Bushels. | Tons. | Tons. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. |
| Maine | 12,304,000 | 1,251,000 | -- | -- | -- | -- | 850 | 266,000 |
| New Hampshire | 4,643,000 | 657,000 | -- | -- | -- | -- | 1,100 | 1,928,000 |
| Massachusetts | 4,050,000 | 706,000 | -- | 103,000 | -- | -- | 37,690 | 425,000 |
| Rhode Island | 812,000 | 44,000 | -- | -- | -- | -- | 1,140 | |
| Connecticut | 2,117,000 | 573,000 | -- | 661,000 | -- | -- | 176,210 | 47,000 |
| Vermont | 6,158,000 | 1,266,000 | -- | -- | -- | -- | 10,990 | 4,383,000 |
| New York | 17,703,000 | 4,938,000 | -- | -- | -- | -- | 6,540 | 12,135,000 |
| New Jersey | 2,067,000 | 376,000 | -- | -- | -- | -- | 5,200 | |
| Pennsylvania | 6,871,000 | 2,182,000 | -- | 486,000 | -- | -- | 33,100 | 1,313,000 |
| Delaware | 194,000 | 23,000 | -- | -- | -- | -- | 4,580 | |
| Maryland | 881,000 | 80,000 | -- | 15,582,000 | 6,000 | -- | 8,530 | |
| Virginia | 2,374,000 | 444,000 | -- | 33,574.000 | 2,683,000 | 3,000 | 7,720 | 1,407,000 |
| North Carolina | 3,615,000 | 134,000 | -- | 466,000 | 51,628,000 | 3,823,000 | 8,050 | 8,000 |
| South Carolina | 3,360,000 | 31,000 | -- | 53,000 | 49,700,000 | 83,616,000 | 6,930 | 28,000 |
| Georgia | 2,048,000 | 22,000 | -- | 163,000 | 213,620,000 | 17,524,000 | 7,660 | 291,000 |
| Alabama | 1,923,000 | 21,000 | -- | 310,000 | 140,000,000 | 200,000 | 7,170 | 9,000 |
| Mississippi | 3,378,000 | 1,000 | -- | 176,000 | 195,240,000 | 1,144,000 | 270 | |
| Louisiana | 1,443,000 | 33,000 | -- | -- | 154,800,000 | 4,705,000 | 1,310 | 160,000,000 |
| Tennessee | 2,051,000 | 52,000 | -- | 33,736,000 | 39,600,000 | 10,000 | 25,090 | 460,000 |
| Kentucky | 1,371,000 | 164,000 | 12,000 | 57,555,000 | 880,000 | 19,000 | 5,810 | 2,447,000 |
| Ohio | 4,847,000 | 1,876,000 | 1,000 | 6,888,000 | -- | -- | 31,500 | 4,380,000 |
| Indiana | 3,573,000 | 2,027,000 | 500 | 3,200,000 | -- | -- | 1,050 | 7,365,000 |
| Illinois | 3,095,000 | 350,000 | 300 | 1,062,000 | 250,000 | -- | 4,250 | 542,000 |
| Missouri | 972,000 | 90,000 | 9,000 | 12,495,000 | 180,000 | -- | 260 | 396,000 |
| Arkansas | 611,000 | 1,000 | -- | -- | 14,400,000 | 7,000 | 270 | 3,000 |
| Michigan | 5,359,000 | 268,000 | -- | -- | -- | -- | 1,730 | 2,611,000 |
| Florida | 300,000 | 2,000 | -- | 195,000 | 9,120,000 | 708,000 | 510 | 373,000 |
| Wisconsin | 853,000 | 67,000 | -- | -- | -- | -- | 30 | 216,000 |
| Iowa | 469,000 | 34,000 | -- | -- | -- | -- | -- | 74,000 |
| District of Columbia | 51,000 | 2,000 | -- | -- | -- | -- | 1,250 | |
| | 99,493,000 | 17,715,000 | 22,800 | 166,705,000 | 872,107,000 | 111,759,000 | 396,790 | 201,107,000 |



THE SOUTH-DOWN BUCK.

In the Cabinet, vol 5, page 225, is the portrait of a South-down Buck of the improved flock of Ellman of Glynd, county of Sussex, England, the origin of which was, undoubtedly, a cross between the Leicester or Dishley, or Bakewell and the old Down breed, so long famous as the only sheep stock grazing the very extensive range of Chalk-hills in that immediate vicinity; the large size and longer staple of fleece indicating that cross; suitable to deeper keep and less exposure of situation. Many individuals of this improved breed have attained great weights, and a laying on of fat truly astonishing; the last steamer to Boston,—the Cambria,—bringing over a hind quarter of "real South-down mutton," weighing 40 lbs., and cutting six inches thick of fat on the rump.

The portrait at the head of our present article, is a perfect likeness of a valuable animal, late the property of E. P. Prentice, Esq., of Mount Hope, near Albany, whose praise as an excellent judge and breeder of fine stock, is in all the country. This fine Buck is of the old and very pure race of the legitimate South-downs, which still retain their peculiarities; and, like the red cattle of the Eastern States, bid defiance to change; their blood scarcely admitting of contamination by closeness of breeding; a little common care in the selection of the best animals, being sufficient to secure the perpetuity of a flock, that on suitable soils and under proper management, will be found the most valuable, perhaps, that can be selected. They are healthy, hardy, quiet and tractable to a proverb; peculiarly adapted to the folding system, which will, in all probability, be practised in this extensive country, as the most convenient, as well as the most profitable, although attended with a portion of extra labour and expense; which would, however, be found to be well paid for. The old race of South-downs are still remarkable for their greater weight of hind-quarter, that portion of the animal which brings the greater relative value; and it is customary to cut from such carcases those haunches, consisting of the leg and part of the loin, which often command a price little less than that of stall-fed venison; while in the estimation even of epicures, they are sometimes to be preferred, abounding as they do, in the "rich brown gravy, which can be properly relished, only" by those who know what is really fine mutton.

In *Baxter's Library of Agriculture* may be found a good description of these sheep. The South-down breeders in England are particular as to form. The wide and deep breast, projecting well forward before the fore-legs, with the rump long and broad, and the tail set on high, nearly on a level with the chine, are indications of a good form and pure breed.

## Can a Horse Reason?

The editor of the Mobile Advertiser, whence we take the following curious and amusing statements of Judge Taylor, says they may be entirely relied on; and can be corroborated by the testimony of hundreds of the most reputable citizens of Mobile.—Ed.

My purpose is not to discuss the question at the head of this article, but to submit some facts for the speculation of those who may be curious in such matters. As you are aware, I own a horse called *John*, that for several years has not only amused, but astonished the public, by his various feats of intelligence and sagacity.

Everybody knows John; and if he is seen, as he often is, in a buggy, and no one in it, walking, trotting, or galloping through the most crowded streets, threading his way among carriages and drays, no citizen offers to stop him; but if a stranger attempt it, he only excites a laugh, and is asked how long he has been in the city? I have witnessed some amusing scenes of this kind, at the expense of some one's *good intentions*.

It is proper I should state, that for the last seven years, with the exception of the past and present winters, I have resided about two and a half miles from the city. I generally come to town every day, about eleven or twelve o'clock. I frequently drive to town and back, without touching the rein. If I come down St. Francis street, he is certain to stop at the Waverly, without anything being said to him; and as soon as I get out, he will start in a trot or gallop, and stop at the Corinthian. If I come down Dauphin street, he will go directly to the post-office, where he will stop until I get out, when he will wheel across the street, and remain there, in his *opinion*, a reasonable time; if he wants water, he will go to a pump, and from one to another, until he finds a friend to pump it for him, when he will return.

John is also a general favourite. The "*freedom* of the city" was long since presented to him in a buggy! He is therefore not confined to any particular street, but goes where he likes, in pursuit of me or his own amusement. He will sometimes go to Water street, and then to Commerce, where, with excellent *taste* and judgment, he will sample bales of hay on the side-walk; but, unlike the cotton samplers, he was never known to fill a bag and carry it off on his back. He not only knows me from others, but can distinguish my voice from all others, as may be easily proved. Hundreds of persons may pass him daily, without attracting from him any particular notice. If I come toward him when his head is turned *from* me, and happen to be talking at the time, although from his tight check rein the motion may be difficult, and perhaps painful, he will turn his head round, resting it against his side, with his eye, which then exhibits a peculiar, tremulous motion, fixed on me, till I pass. If he then desires to go home, he will raise his head, point his ears, and start after me, stepping loftily, and keeping me in view. Although a spirited animal, nothing "frightens him from his propriety;" in fact, he "dares do all that may become a" —*horse!* It is a fact quite notorious, that he will go about the city in pursuit of me; it is equally so, that experiments have been made to induce him to leave me, by turning him up the street leading to the country; but after turning a block or two, he would invariably come back. There are many instances of gentlemen having driven him to their residences in different parts of the city, and turned him loose to come back; and I am informed some bets have been pocketed on such performances. I had a standing bet for some years, that I would send him to the market, or the post-office, or any house or point that might be designated, and that he would return safely with the buggy. No one doubted he would do it. But a few months since, I sent him from my house across the country to the Spring Hill road, and up that road a distance of a mile, to the house of a friend, although he had not been there for more than a year. I have often sent him on errands of a similar character. I have only to go with him and show him a place, and he never forgets it. He is perfectly under command of my voice. I speak to him as I would to a servant; and that he understands many things I say to him, is proved by the fact that he obeys me. In harness, or out of it, he follows me about like a dog. He stands in no fear of me, and has no cause; for although I may sometimes *scold* him, I have never struck him, as I believe, in the seven years and a half I have owned him. He therefore does nothing from fear, but everything from kindness.

It is getting quite late,—two or three o'clock—I must have gone up the street. He turns up Royal street, and stopping a short time at the Literary Depot, and several other places, he goes to the Waverly. There is no use in going farther in this direction, for he knows I seldom go above that point. He becomes uneasy; turns back, and goes down the street as far as the court-house. He turns again, much excited; his ears thrown back, his neck arched, his nostrils flattened, and starts into a fast trot. As he passes the Mansion House, he is in a round gallop, wildly throwing his head from

one side of the street to the other. If he sees me, he will stop, or come up to me. I get into the carriage, and without saying a word to him, or touching the rein, he takes up the first street leading to our home. Here is a narrow lane, leading to the gate; and to make a clean turn through it, it is necessary to keep to the right, near the fence. John knows it, and stops at the proper point; I get out, open the gate, and pass through. He wheels short round, describing a quarter circle, and sees all is right before him; the gate is narrow, there being but five or six inches to spare, between the wheel and the post. John knows it; and in more than five hundred times passing through that gate, he has not touched the post more than three or four times; but when he happens to do so, he will immediately back, sheer off of his own accord, and pass through, never failing in his second attempt. There are many instances of his having locked his wheels with other carriages, when endeavouring to get a good shade, and disengaging himself in a similar manner, and which have been noticed by Gen. T. D. W. and others. But for the oddity of it, I certainly should not use either rein or bridle. In going to the city, or back, but especially at night, I would trust him sooner than a professed watchman. Not the slightest injury has ever occurred to the carriage by any fault of his.

But he has also a mode of communicating his wishes and wants, by signs, looks, and actions, which are as perfectly comprehensible by me, as if expressed in the plainest language spoken by man. He not only *uses* a language to express his ideas, emotions, &c., but he has clearly *invented* that language himself, as I think I shall prove. A portion of the year, the stable being left open for that purpose, John is allowed to come to the house and kitchen when he likes. About twelve o'clock, one light night, I heard a heavy knocking at the kitchen door. The knocking continued so long and so loud, that I got up and went to the window, when I found it was John creating the disturbance. His hind feet were on the ground, and his fore feet on the upper step. Lifting his foot, he would strike the point of his hoof against the door, ten or fifteen times, repeating it every few minutes. From many other feats of his sagacity, I was well convinced of his object. I called up the servant, and charged him with neglecting to feed the horse; but he stoutly denied the charge. It is certain I did not believe him. But the same thing happened several times afterwards, and I had as often called up the servant, who still asserted the horse had been fed. One day I happened to hear the old negro talking to the servants in the kitchen, laughing heartily, and repeating, "John won't lie, and master knows it." A laugh. "He believes John, and won't believe me." Another laugh. "I won't tell any more lies about feeding John. It's no use." They all laugh, and I laugh! When he wants water, he will go to the well, and knock against the curb, or the water tub, in the same manner. Of late years, the servant gets up at the earliest knocking, for he knows that no sleep is to be had on the premises until John's demands are complied with. I often direct that he should not be fed in the morning, for the purpose of inducing him to adopt some other mode of communicating his wishes. After exhausting his patience in his usual efforts, he would come to the house and walk by the door, stepping short and quick, and wheeling abruptly round. After practising in this manner for some time, he would give one of the queerest squeals I ever heard, as much resembling the yell of a Choctaw, as anything else, although he *can*, if he likes, squeal in very good *English!* In November last, Mr. H., of C., who was at my house, desired to witness some of John's performances. After performing several feats I have related, and we had gone into the house, the house servant came to me and said John would not let her go to the kitchen. We went out on the gallery, and saw that John had planted his heels directly opposite to the kitchen door, looking very savagely. I ordered the girl to drive him away, which she attempted to do with a stick. But no! John would not move an inch. With his head near the ground, his ears backed, stamping violently, and shaking his head, he bid defiance. All this I knew was merely for effect. I knew he would not have injured the least of living things. I then told the girl to go to the well and draw him water. As soon as she started in that direction, he threw off his theatrical character and followed her, looking pleased and highly gratified at the success of his ingenious experiment. I will relate one feat of a different character. A year or two ago, when I came to the city one morning, I left John at a shop in Church street, to be shod, requesting the smith, after he had done so, to put the horse in the buggy, and let him go; a practice I have pursued at that and other shops, for several years. An hour or two after, I was standing on the side-walk, opposite to the Mansion house, when I saw John coming down Government street, and then up Royal, in a fast trot, stopping within a few feet of me. He soon commenced

stamping violently with his fore foot, which continued for a minute or two. The West ward omnibus was standing some 30 or 40 feet in front of him. Walking up to it, he put his foot on the *upper* step, and commenced biting it. After relieving himself of the fly—as I supposed it was—he backed the buggy to his old position. Although John *knew*, and had *his* reason, why he went to the omnibus, yet it is proper the *learned* public should be informed, that as his check rein would not allow his *head* to be brought down to his *foot*, he went to the omnibus to bring up his *foot* to his *head!* Mr. P., then and now of this city, and a number of other gentlemen, were amused spectators of this performance.

John is a Northern horse, finely formed, and without a blemish; and although in his twelfth year, he has all the playfulness and elasticity of a colt. H. W. Taylor.

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For the Farmers' Cabinet.

## Potatoes, Wheat, &c.

Potatoes in this section of country the past season, have rotted to an alarming extent; and I learn from the papers that the complaint is very extensive; many conjectures and speculations have been afloat respecting the cause. Among the most probable causes that I have heard, is wet weather.

Through the whole course of last summer the ground was not dry enough to work more than two or three days at a time. I concluded this must be the cause, and upon general inquiry and particular examination, I found that the more dry and hilly the land, the less disease among the potatoes. The colour of the soil was also found to affect the quality of the potatoes materially. The blacker the land—other things being equal—the more disease; from this I conclude that the heat absorbed by the colour of the soil, together with excessive moisture, causes all the complaint of which we hear so much. In situations where potatoes are subject to this disease, the driest and lightest coloured land should be selected. There may some advantage be derived from planting in ridges thrown up for the purpose. Potatoes should be planted as soon as the ground is in good condition, and dug as soon as they are done growing.

Wheat is often much injured by the rust, and in some situations and unfavourable seasons it has been so completely destroyed, as not to pay for reaping, though quite a large crop of straw. It has been generally conceded that the rust is caused by the bursting of the straw, and the sap or nourishment that should feed the grain, is permitted to ooze out and dry on the surface. There are several things that tend to the production of rust; one of the most prominent is late sowing, which brings the critical time of ripening too late in the summer, when hot days and frequent showers cause a greater flow of sap than the grain can dispose of; in consequence of which the straw bursts, the sap runs out, and the grain shrivels for the want of nourishment.

Wheat that is seldom agitated by the wind, is apt to grow tall and tender, and is sure to be ruined unless the ripening season is very dry and cool, so as to feed the grain slowly.

It is a fact that may have escaped the observation of some, that wheat never rusts in countries where it is constantly agitated by the wind; this is owing, I suppose, to its growing slower; consequently the straw is firmer, and not so liable to be ruptured, and the danger of any sudden flow of sap is entirely removed by continual waving.

Micajah T. Johnson.

Short creek, Ohio, 1845.

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## Sulphate of Ammonia, its uses, &c., for Farming purposes.

Sulphate of ammonia is better known to the farmer than any other salts of ammonia, having been a good deal advertised of late by venders of artificial manures. This salt is a compound of sulphuric acid—oil of vitriol—and ammonia. It is not found in a free state of nature, but is obtained by adding oil of vitriol to urine in a state of fermentation; or another plan is to apply the same acid to the waste liquor—ammoniacal liquor—of the gas works, and then applying heat; the water is driven off, and the substance called sulphate of ammonia is left. The sulphate obtained from urine contains other salts, as the phosphates found in urine, and which are likely to add to its utility. The simple mode in which sulphate of ammonia is got, will show the farmer how much might be effected by a general acquaintance with chemistry. The urine of his stall-fed animals might be collected, free of other matters, by having a small reservoir at one extremity of his buildings, into which, by small channels, the fluid would run from each of the out-houses where the cattle are lodged. Let the urine so collected ferment, and pour into it a quantity of the oil of vitriol, which can be purchased at the druggists' for a mere trifle. The vitriol has the effect of *fixing* the ammonia—that is, preventing its flying off, which it is apt to do when in combination with carbonic acid.

The sulphate so formed is not volatile. Instead of oil of vitriol, gypsum might be used. Along with the sulphate of ammonia, other ingredients of considerable value as manures are obtained. By economising well the means within our reach, we become, in a measure, independent of the "manure venders." We have opportunities of noticing the uses to which the urine of animals may be applied, but we cannot here overlook the extreme slovenliness and inattention which are almost universally displayed in the farm yards around us. Every one extols, and justly so, the manure of the farm yard; yet how many of those who so loudly boast of its superiority to artificial manures, attempt to manage their dunghills as they ought to do? "Far-fetched and dear-bought," as some of our manures are, the farmer continues to buy, whilst he daily witnesses under his own nose the loss of most valuable manure. Ammonia is constantly rising from the stalls and dung heaps, which might be *fixed* by oil of vitriol or gypsum. The urine is allowed to run anywhere but into reservoirs or *tanks*—very often into a corner of his yard, which in wet weather serve as a *duck pond;* or it is swept to the door of the stable or cow house, where, by being exposed to the air, it is soon dried up; how melancholy a fact it is that these gross negligences prevail so extensively—almost universally! There are worthy exceptions, it is true, and it is from these more enterprising farmers that we expect those improvements which agriculture stands so much in need of. Let them not confine their knowledge to their own farmsteads, but give the results of their experience to the world.—*J. H. Shepherd's second edition of Hints to Landlords and Tenants.*

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### The Cranberry.

This delicious fruit is coming into such general use, and is becoming so important an article of export, and so much interest is now taken in its cultivation, that I propose giving a concise account of the same, and its general history.

The common American cranberry (*oxycoccus macrocarpus*) is found growing in a wild state in swampy soils, in the eastern, middle, and western States. The first account we have of the cultivation of this fruit, is by the late Sir Joseph Banks, who produced from a bed eighteen feet square, three and a half Winchester bushels; being at the rate of 460 bushels to the acre. Captain Henry Hall, of Barnstable, Mass., has cultivated this fruit for the last twenty years. His method is to spread on his swampy ground a quantity of sand—this is to kill the grass; but where sand is not at hand, gravel will answer the same purpose. He then digs holes four feet apart each way, and puts in the holes sods of cranberry plants about one foot square.

As this plant naturally grows in a very wet soil, it is generally supposed it will not thrive in a dry soil; but this idea is erroneous. Mr. Sullivan Bates, of Billingham, Mass., has cultivated the cranberry on a dry soil for several years, with the utmost success—having produced 300 bushels to the acre on several acres, and his fruit double the usual size. His method is to plough the land—spread on a quantity of swamp-muck, and after harrowing the soil thoroughly, set out the plants in drills twenty inches apart—hoeing them the first season. After this, no cultivation is needed. By both the above methods, the plants will cover the ground in three years.

From my own knowledge of the cranberry for the last thirty years, should I design commencing the cultivation of this fruit on an extensive scale, I would try it on both swampy and dry soils. I would drain the swampy soil, plough it as early as possible in the spring, and set out the plants on the plan of Mr. Bates.

To show the rapidity with which cranberry plants increase, I will add this statement from an English book on fruits: "An English gentleman had only a few plants, these he cut in small pieces or cuttings, and set them out in a green-house. In the spring he prepared some swampy ground by spading it 12 inches deep. In a bed 150 feet long, and four feet wide, he set out 75 cuttings in one drill through the length of the bed, putting the cuttings two feet apart in the drill, and yet in three years the plants completely covered the ground."

In Massachusetts the cranberry crop is once in a few years cut off by the late spring frosts. This may be prevented where a meadow is so situated as to be flowed. The water should not be over one or two inches deep on the cranberries, nor be left on later than the last of May, in this climate. If kept on till it becomes warm, it will kill the vines. Perhaps the best management would be something as they flood the rice-fields at the south, or water meadows in England—let the water on while the weather is coldest, and then take it off as it moderates. Sometimes, in the eastern States, the cranberries are destroyed by a frost in September; where water is convenient and plenty, the meadow should be flowed on cold nights at this season, as well as in the spring.

Previous to shipping cranberries, they should be run over a platform slightly inclined. The rotten and bruised fruit will not run off, but stick going down the platform, and are scraped off and thrown away. The perfect fruit is then put into tight barrels, and when headed up filled with water, and in this manner they arrive in Europe in perfect order, and have frequently sold in foreign ports at $20 per barrel.

Rakes are now made for the express purpose of gathering cranberries, and although these rakes tear the vines somewhat, yet the crop is not diminished by raking; on the contrary, it has been increased. Some years ago, a gentleman in Massachusetts commenced raking his little patch of one-fourth of an acre. The first year it produced 12 bushels, the next 18, the third 25, and so on till his last harvest, when the crop amounted to 65 bushels. This increase is easily accounted for by the method of gathering with rakes—the pulling up a few of the vines loosens the ground, and although not intended, yet in fact the raking acts as a partial cultivation.

To promote the cultivation of this fruit, the American Institute is making arrangements to supply horticulturists with plants early in the spring, in either large or small quantities; and I would recommend those wishing to purchase, in this vicinity, or New York, to get their supplies in this way.

B. G. Boswell.

Philadelphia.

## American Provisions.

This article of American exports to England has become one of much importance. We copy the circular of the highly respectable house of J. & C. Kirkpatrick, of Liverpool, largely occupied in this business.

"The business of the past month in general produce has been limited on the whole, the season of the year being unfavourable to any very extensive transactions, while the opinion which has been gaining ground in the best informed quarters, that future changes are contemplated in our tariff system, induces all persons to act with caution in their purchases, until it is definitely known what articles are to be the subjects of legislation in the session of parliament now about to open. The sale of American produce has been affected by the same cause, though it is certain that any change that may be made in our present tariff will be favourable to the extension of our trade with the United States. The imports from thence during the past month have been unusually large, and the shipments now on the way will give us equally large arrivals in the present one.

"Beef is now coming in freely, and the best parcels have met with a ready sale from the quay at our highest quotations, but such parcels as are inferior in quality, or irregularly cut, are with difficulty disposed of, even at a considerable reduction in price. The quantity now in dock and on passage being large, dealers are holding back in the expectation of being able to supply themselves on easier terms; but unless the import be much in excess of last year's, there cannot be any material decline from present rates. Some of the Irish curers who packed beef to meet the early demand of the season, have been forcing off their stocks at low and unremunerating prices, being unwilling to meet the increased arrivals of American, the best brands of which are taken now in preference to their own.

"Pork has also been arriving more freely, and generally of very prime quality. Its value has declined somewhat since the date of our last advice, Irish being offered at a reduction of three shillings per barrel, in consequence of the increased competition which it meets from the improved quality of the late arrivals from America. We anticipate, however, an enlarged demand in the present month, and a firm market, the prospects of this article continuing very favourable, and warranting us in confirming the opinion already expressed, that our future supplies of pork, as well as beef, will be principally drawn from the United States.

"*Cheese.*—The demand for this article has been quiet throughout the month, which, with very large arrivals, has caused the small stock at the end of the year to be raised to at least 600 tons. The home supplies have also been large, but are like to decrease after this month, when we anticipate a better demand from America."

From the Farmer and Mechanic.

## Soiling Cattle.

Soiling means "the practice of supporting animals in the summer season with green food, cut daily, and given to them in the houses, stalls, or yards." The advantages of such a practice are the following:

1. The saving of land. 2. The saving of fencing. 3. The economising of food. 4. The better condition and greater comfort of the cattle. 5. The greater product of milk. 6. The manure obtained. In England, soiling is practised considerably. The saving of land there, is considered amply sufficient to repay any extra labour, leaving the manure, so valuable to the British farmer, out

of the question. Three-quarters of an acre are found fully to supply one cow, by soiling, while one and a half are required in pasturing.

In America, and in the State of New York, very little has been done in the settlement of the question before us, whether soiling is suitable to this country? Mr. Pell, of Pelham, has pursued soiling, and his experience fully bears out the advantages above stated. Mr. Pell says, eight acres will afford more and better food, than forty would pastured; and the manure saved is sufficient to pay the interest of a large farm.

The American Institute has led the way in inquiry about the advantages of soiling. At the Farmers' Convention of October, I find the following questions: "Is soiling practised? with what advantage and comparative cost?"

In Massachusetts, soiling has been followed for many years. The Hon. Josiah Quincey says: "At the end of the soiling season—from June to November—I had $200 worth of manure, had kept 20 head of cattle on 17 acres;—by pasturing, I had to allow 50 *acres for* 15 *head*—had my stock in prime condition, a full supply of milk all the season, saved all expense on cross fences, not requiring one rod of interior fence on my whole farm, while previously I had 1600 rods of fencing, and paid $60 yearly for repairs. The additional expense I had gone to in cutting the food, and giving it to the animals, amounted to $163. My manure alone paid for this. I have practised soiling for six years, and no consideration would induce me to abandon it."

"On the farm of McLean Asylum, thirteen cows and seven horses are kept, although the land under cultivation is only about 20 acres; and yet hay is sold. Mr. G. E. Adams, of Medford, soils his stock, being convinced of its great superiority over pasturing."

For a very excellent article on soiling, see Journal of Massachusetts Agricultural Society, vol. 3, page 318.

I think the introduction of soiling cannot but be attended with immense advantage.

I would draw the attention of gentlemen present to the admirable soiling qualities of Lucerne. This plant is perfectly adapted to this climate—cuts four or five times every season—stands the winter better than clover—is ready for cutting much earlier in the spring than any other grass, and gives excellent milk. It has been cultivated in New York for some years, though its introduction is as yet rather limited. In support of this, and with regard to its other properties, so valuable to our farmers, I quote Buel's Farmer's Companion, p. 211; Cultivator, January, 1844; Mass. Agricultural Society's Journal, vol. 9, pp. 24, 25; Memoirs of the Board of Agriculture of the State of New York, vol. 1, p. 254; New England Farmer, August, 1844.

THOMAS KERR.

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### Agricultural Premiums.

AT a stated meeting of the Philadelphia Society for promoting Agriculture, held on the 2nd inst., it was Resolved, that the following premiums be offered for crops, the ensuing season.

For the best field of Wheat, not less than five acres, $10.

For the best field of Rye, not less than five acres, $10.

For the best field of Corn, not less than five acres, $10.

For the best field of Oats, not less than five acres, $10.

For the best field of Potatoes, not less than three acres, $10.

For the best acre of Sugar Beets, $8.

For the best three acres of Ruta-baga, or other turnip, $8.

For the best half acre of Carrots, $8.

For the best half acre of Parsnips, $8.

A particular account of the expenses and manner of cultivation, will be required of competitors, and also satisfactory evidence of the product of each crop.

A. CLEMENT, *Rec. Sec'ry.*

Philadelphia, April 4th, 1845.

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GUANO.—on the 29th of January, a cargo was sold by public auction, the first lots £7 12s. 6d. to £7 15s., progressively down to £7 5s. per ton. The market is now quieter. Several thousand tons of Peruvian have been sold at £10. The past week has been one of unprecedented excitement; perhaps more so than has ever occurred before in any other article of merchandize, and a great many thousand tons have changed hands.

Advices from Ichaboe state, that about 350 vessels were there about the latter end of November; that the guano remaining on the island was estimated sufficient to load about 150 of them; and that, owing to this, vessels were leaving in ballast, some proceeding to Saldanha Bay and Angra Pequena, in quest of the manure that may be deposited on those islands.

Letters have been received in Leith, mentioning the discovery of an Island, named "Nalagar," where guano is said to abound from four to seven yards in depth, and covering an area of about eight acres.—*Liverpool Paper.*

## Royal Agricultural Society.

The following remarks of our friend Henry Colman, which we find in the second number of his Agricultural Tour, will hardly fail to interest all of us who look on the movements of our own Agricultural Societies, with that kind of solicitude, which arises from a wish that they may do all the good throughout the country that they possibly can.

The Highland and Agricultural Society of Scotland, is an institution similar to that of the Royal Society of England. It is richly endowed and powerfully patronized. "The exhibition of the Society at Dundee, last autumn," says Colman, "was, in the character and condition of its animals, in no respect inferior to that at Derby, though the Scotch cattle present different varieties from those which are fashionable and most esteemed in England." The general management of the Scotch Agricultural Society does not essentially differ from that of the English Royal Agricultural Society. The general exhibition at Dundee passed off much in the same style as at Derby, excepting that the Scotch were thought to have *drunk their toasts with a little more heartiness than the English.*—Ed.

In the continued progress of improvement the Royal Agricultural Society of England contributes its full share. This was established about 1837, and embraces a long array of the highest rank and talent in the kingdom, and a vast body of farmers, landlords, and others interested in Agriculture. Its funds are large, arising from donations and an annual subscription of a guinea from each of its members; but it has received no endowment from the government. Its objects comprehend every branch of husbandry and rural economy. It has a central office, or building in Hanover Square, London, where the Secretary of the society resides, and where the council of the society and other members hold weekly and monthly meetings, for the management of the business of the society, and the discussion of Agricultural subjects, and the reception of Agricultural information. This conduces very much to the interest felt in the projects and operations of the society, and is the means of diffusing a great amount of valuable information.

It has begun here the establishment of an agricultural library and museum, which presently must assume a considerable importance, and become curious and useful. The object of the library is to collect the most useful and valuable publications on subjects connected with Agriculture, in all its various and kindred branches, including likewise geology, botany, agricultural chemistry, engineering, and manufacturing, as far as they are connected with the making of agricultural implements, and the great agricultural operations of draining, embanking, irrigation, and other important farming processes. The object of its museum is to exhibit its specimens of agricultural productions, which are capable of preservation, seeds, plants, grasses, samples of wool, mineral manures, models and drawings of agricultural implements, and whatever in any way may conduce to the advancement of the science or practice of agriculture. It is obvious how very important such an establishment must prove, by giving practical men an opportunity of inspecting, at their leisure, the most improved subjects of cultivation, the best grains, and the best grasses and vegetables, and, at the same time, the best tools and machines with which to cultivate them. I have often urged the establishment of agricultural museums upon my countrymen, especially in the capitals of the States and of the United States, where the members of the different Legislatures assemble. Coming, as they do, from different and distant parts of the country, they will be enabled to carry home information of the utmost importance to the farmers, besides having their own knowledge advanced, and their own zeal quickened in this great cause. The commissioner of patents, in Washington, distinguished by his indefatigable exertions for the advancement of agriculture, has already laid the foundation of such a collection at the metropolis of the country, and in connection with his own department, where models of all patented agricultural machinery are always to be seen. It is to be hoped that the friends of an improved agriculture in the country will encourage and assist him in extending his collection of valuable grains and seeds. There are few ways so little expensive, in which they may render so much service to the country. It would be desirable that the Government should enjoin it upon the commanders of all their ships of war, visiting different parts of the globe, that they should collect and bring home such seeds and plants, and such models of implements, as would be likely to be of use. That universal vegetable, the potatoe, furnishing so much food to man and beast, and scarcely second to any in value, considering the multitudes whom it supplies, and the quantity of food it affords, is said to be an importation from South America. The cotton plant, a source of enormous wealth to the country, is likewise esteemed a foreign plant.

Besides this, the Royal Agricultural Society issues a semi-yearly publication, of valuable communications and papers, both on the science and practice of agriculture, which fall in its way, or are made to the society in reply to queries proposed for discussion and for information, upon which it offers pre-

miums of a pecuniary or an honorary nature.

The society, likewise, at some place in the country, easily accessible, holds an annual show or exhibition of animals, implements, and agricultural products, upon the best of which it awards premiums. This occupies, generally, four days. Tuesday is exclusively assigned to the several committees for the inspection of subjects of premium, in the way of implements and agricultural machinery, when no persons whatever, excepting the committees and persons necessarily attendant upon them, are admitted to the yard, so that they have a favorable opportunity of quiet inspection, uninterrupted by any interested or curious parties; Wednesday is devoted, in the same way, to the examination of the animals, and afterwards the yards are open to the public, upon payment of a reasonable entrance fee; and on Fridays a public sale, at auction, is held of such animals, or implements, as their owners are willing to dispose of in this way. The collection of people, on such occasions, from all parts of the country, and, I may properly add, from all parts of the world, is immense. Two large public dinners are given on the occasion; the one called the *council dinner*, on Wednesday, and the other, called the *society's dinner*, on Thursday, when provision is made for fifteen hundred guests, in a pavilion erected for the purpose. These dinners are, in general, seasons of great hilarity, and promotive of sympathy in the great cause of agricultural improvement. If no other good comes of them to agriculture, they serve at least the purpose of consumption, and so quicken price and demand.

On these occasions the prizes are announced to the successful candidates; and these premiums are given either in medals, plate, or money, and are received with no small degree of public and self-congratulation.

The arrangements, in general, are made with great care. The animals are assorted in distinct classes, with separate committees for the examination of each class; and the implements are placed according to their different designs and uses. It would be impossible to convey an accurate or adequate impression of the number and variety of the animals offered, in such cases, for exhibition and premium. I have already given a list and the number of agricultural implements exhibited the last year at the Derby show; but that conveys no idea of the ingenuity and skill evinced in their construction. One is led to conclude, from the inspection, that there is no operation or function, connected with human life and labor, for which mechanical labor does not attempt, and may not presently succeed in furnishing, an instrument or machine. In many cases, a machine is any thing but a facility; and not a few of the machines, both in their contrivance and in the expensive and showy manner in which they are got up, evince pretty strongly the guage which the contrivers and makers have taken of the understandings and pockets of the probable purchasers. They are seldom at a loss to put the pail under a full cow.

In many respects the arrangements are admirable, and well worthy of imitation.*

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* The terms on which the premiums for seed wheat are to be awarded, are well worth the observation of other agricultural societies, and I therefore subjoin them.

"SEED WHEAT.

"I. Thirty Sovereigns, or a Piece of Plate of that value, will be given to the Exhibiter, at the Meeting at Derby, of the best 14 bushels of White Wheat, of the harvest of 1842, and grown by himself.

"II. Thirty Sovereigns, or a Piece of Plate of that value, will be given to the Exhibiter, at the Meeting at Derby, of the best 14 bushels of Red Wheat, of the harvest of 1842, and grown by himself.

"III. Twenty Sovereigns, or a Piece of Plate of that value, will be given to the Exhibiter, at the Meeting at Derby, of the best 14 bushels of Spring Wheat, of the harvest of 1842, and grown by himself.

"Competitors are requested to send with their Wheat, specimens, fairly taken, of the same in ear, with the whole of the Straw, in a bundle not less than one foot in diameter, and with the roots attached.

"[12 bushels of the Wheat will be sealed up by the Stewards, and one of the remaining bushels of each variety will be exhibited as a sample to the public; the other being kept for comparison with the produce of the next year. At the General Meeting, in December, 1844, the prizes will be awarded.]

"The two best samples of each of these three classes of Wheat, without at that time distinguishing, in any of the cases, between the comparative merits of either sample, will be selected by the Judges, appointed for the Meeting at Derby, and will be sown, under the direction of the Society, (the Winter Wheats in the autumn of 1843, and the Spring Wheat not earlier than the 1st of March, 1844,) by four farmers, who will make their report, upon which the prizes will be awarded, provided there be sufficient merit in any of the samples. Ten Sovereigns will be given at the Meeting at Derby, to each Exhibiter whose Wheat has been selected for trial.

"**** *No variety of Wheat which has been selected for trial at any previous show shall be qualified to compete.*"

The following are the instructions to the Judges on other subjects:

"As the object of the Society in giving the prizes for neat cattle, sheep, and pigs, is to promote improve-

Every possible effort is made to secure an impartial decision among the competitors; for, besides that they are not suffered by their presence to influence the examiners, the examiners themselves are selected from among persons who are as far as possible disinterested, and not likely to be influenced. They are chosen, likewise, with a special reference, in their characters and qualifications, to the nature of the subjects submitted; and every pains is taken in this way to secure the greatest aptness and talents. The name of the competitor is not given where it can be avoided, but only the number of the article presented. The rules of admission and competition are stringent and absolute, and no exceptions are, on any account, allowed. When, last year, a competitor attempted to introduce a machine out of season, or in some way contrary to the published rules, and wrote to one of the agents of the society, that, if a *silver key* should be found necessary to its introduction, he begged him to use it,—this attempt at bribery was rejected with proper indignation by the society, and the individual concerned, though eminent as a machinist and manufacturer, and offering every apology for his "indiscretion," was forever irrevocably excluded as a competitor for any of the premiums of the society.

The society likewise offers premiums for essays, which are deemed deserving of such reward, upon any given subjects, and for reports on the agricultural condition and habits of different counties and districts. This has been the means of bringing out many valuable papers. Here, too, the decision is sought to be rendered as fair as possible; for the name of the writer is not given with the essay, but under a separate and sealed envelope, which is not opened until the successful essay is announced; and then the seal is broken, and the writer's name declared, in the presence of the society.

The society likewise has a consulting chemist, a consulting engineer, a botanist, and a professor of the veterinary art, of whose services, in any desirable case, it avails itself. Some time since it numbered on its lists more than 6,500 members; and has been, since that time, steadily on the increase. It is impossible to overrate the advantages which such a society brings with it to the agricultural community; for, though it enrols among its members many gentlemen who are mere amateurs in the profession, and take little interest, and have little knowledge of its practical details, yet, on the other hand, it combines, among the highest men in the kingdom, a very large amount of practical talent and skill—men of the most accurate observation, who carefully enter into the whole subject. There is another great and good influence which it powerfully exerts, and which must not be overlooked. It gives a high respectability to the agricultural profession, and presents it as a pursuit, not, as has been too often said, for mere dolts and clod-hoppers, but for minds of the highest order, and for men of all conditions, from the prince to the peasant; for "the king himself is served by the field." The prizes are contended for with an ardour little short of that which displays itself in the contests of political life, and received with a high sense of their value. I have seen, at the tables of some of the highest noblemen in the land, the premiums of agricultural success, exhibited in some form of plate, with more triumph than they would display in the brilliant badges of their rank.—*Colman's Agricultural Tour.*

ment in breeding stock, the Judges, in making their award, are instructed not to take into their consideration the present value to the butcher of animals exhibited, but to decide according to their relative merits for the purpose of breeding."

"In the class for horses, the Judges, in awarding the prizes, are instructed, in addition to symmetry, to take activity and strength into their consideration."

## Cultivation of the Cranberry.

A good many enquiries have been made in relation to this subject, and the following is taken from the Boston Cultivator. The conversation occurred at an Agricultural meeting in Boston, in the early part of 3d month last.—Ed.

Mr. Buckminster said, that Albert Ware, of Sherburne, had raised 200 bushels of Cranberries to the acre.

Mr. Gleason observed, that when there were no floods in the spring on the Concord river, the plants come forward early, and are liable to be killed by frosts while in blossom. Cattle biting off buds in the spring are very destructive. He has a plat of cranberries, on high land, that have rooted out the grass. The land would produce corn, barley, and potatoes. They were never killed in the winter.

Mr. Earle, of Worcester, said, when a boy he crossed a meadow where fine cranberries grew on high land, on the side of a hill; the soil was strong and moist.

The Chairman remarked that low lands were much exposed to frosts. He stated a case where a meadow produced good crops of cranberries till it was ditched; then it failed.

Mr. Allen said that he had known frost every month in the year; and cranberries were liable to be killed if they were flowed.

A little plat of cranberries grew on high land, from which his daughter picked a pint or a quart.

Mr. Bragdon, of Milford, said that his father had a meadow which bore cranberries. He ditched it and the cranberries failed; but as the ditches filled up the cranberries re-appeared.

Mr. Breck said, where he was born, in Medfield, cranberries were considered worthless, and attempts were made to destroy them. They flourished on flowed lands; but as they were drained and dried the vines died.

Mr. Cole stated that, in 1843, cranberries were killed extensively, on the morning of the 4th of July. He had been informed by several persons, who flowed their cranberry meadows, that they turned off the water the first of May; but, as they were liable to be killed in the blossom the first of June, they should try the effect of keeping the water on till the last of May. There is no regular system established as to the cultivation of the cranberry. He asked a gentleman of experience and observation to give the best mode of culture, and he said that they would flourish well in sand and water. As the cranberry grows on marshes, where the salt water often flows, salt may be good manure on high lands. He had seen them grow on upland which was not too moist for potatoes.

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### Making Hay—Cutting Grass.

Twenty-two years ago, Judge Cheever says, he purchased a small hay farm, and upon that and elsewhere he has ever since cut from 100 to 250 tons of hay per year. Of course it had become his interest to learn all he could of the best method of seeding, and keeping up his meadows; the best season, and best mode of cutting and curing hay, and then how to turn it to best account. His bottom lands upon the rear, he seeded with timothy only, except in some places where it was too wet to grow timothy; there he seeded with red-top. On his uplands he seeded with timothy and clover. Where he used timothy alone, about eight quarts to the acre was his quantity. Where he used clover with it, he used six or eight pounds of clover to six or eight quarts of timothy. He had succeeded in seeding with timothy at almost all seasons of the year, but always best when he covered the seed well. He had had good success in seeding with buckwheat, sowing the fore part of July, sowing the buckwheat thin, not over five quarts of seed to the acre. If he seeded with winter grain, he preferred sowing timothy in the fall with grain, and in the spring, of course, if on a spring crop. He had succeeded much the best by sowing and passing a light harrow over it once, to cover it well. He had had good success in sowing clover in the fall, with grain, on sandy and gravelly lands; but on clays and tenacious soils there was great danger of loosing it, from the action of the winter frost. It was safest to sow clover in the spring, upon some of the last snows, if on winter grain, and with the grain, using the harrow upon it, if sowed with spring crop. He always used the harrow when he could. He had kept up his meadows by leaving the after growth upon them as much as he could; and where he grazed considerably in the fall, to repay it by an occasional top-dressing. Grass land, whether bottom or upland, will keep itself up, if mowed once in the year, at the ordinary season, if all the after growth is left, without top-dressing. If the fall is dry and the after growth light, the next crop will not be full, but the first wet fall will bring it up again. Meadows should be drained, when practicable, as well as tillage lands. Although irrigation is very useful, where properly applied, an excess of water is very hurtful, especially to the quality of the hay.

*Making Hay.*—He would cut his clover in blossom, not sooner. He would let it take the sun one day, but not enough to have the leaf break off; then put it in small cocks and cure it, until by a few hours' drying, by turning over and breaking the cocks, the fluids would be so far out of it that it may be housed without hurting. The length of time necessary to cure it will depend upon the state of the weather, and the larger or smaller growth of the crop. Upon this the farmer must exercise his judgment.

He would not cut timothy until it had passed out of the blossom. Professor Davy, in his Agricultural Chemistry, says, the 64 parts of clover hay cut in the blossom, produced 10 parts of nutritive matter, and the same taken in seed. Timothy, 10 parts in blossom, and 23 in seed. This in the timothy is probably too much; but that the nutritive matter in timothy improved after the fall of the blossom, he had no doubt. Red-top comes to maturity later, and he did not think there was much difference, whether cut in the blossom or soon after. He believed timothy cut in blossom would, pound for pound, produce more milk when fed to cows or sheep, than it would cut afterwards; but for horses and other stock, he thought it more nutritious to stand a little longer. It certainly improved in weight.

He preferred mowing his hay, as far as he could, when free from dews or water. He let the swaths take the sun a few hours, until the top got a little wilted or seared, before

turning. It thus held up the greener parts when turned over and spread, and permitted the air to circulate under it: it also gave the ground between the swaths time to dry, which was important in hastening the curing. In this way he avoided the necessity of turning the hay after being spread, which was one of the most tedious processes through which the hay had to be passed, and of course the most expensive. He never permitted his hay to take a dew when it had sun enough to wilt it considerably, if he could help it. The dew discoloured it, and he had never been able to restore the fine fresh colour afterwards. He preferred letting his hay stand over night in the cock. He could then better tell of its fitness to be housed. It is very easy to break up the cocks and give it more sun, if necessary; and the slight fermentation or sweating in the cock, which is checked and dried off in carting, is a great preventative against heating in the mow. Hay heated in the mow is sure to be discoloured. Some people insist that it is not injured for feeding, especially to cattle. It may be so. I know that flour, corn, or oats, which have been heated until they are musty, are thought not so good. I do not know why hay should be.

On the approach of rain, I always put all the hay that has had any sun of consequence into the cock. If the storm is a long one, it may turn yellow, so that it cannot be restored, but it will retain most of its nutritive matter and weight; whereas if left spread out to take the rain, it loses both, and is much worse discoloured. I never use salt upon my hay, but upon compulsion. When the weather is good, I dry my hay sufficiently to keep, and as soon as I can, I house it; but sooner than leave it out to take a storm, even in the cock, I would put it in a little short dried, and apply salt to save it, as I would sooner have it salted than musty.

The river counties make hay for the New York and Southern markets.

On bottom lands, which are occasionally overflowed by turbid water, and where the meadows are not grazed, this is not bad husbandry, especially where the hay brings fair prices; but very few of the upland farms will bear to have hay taken from them for any length of time without impoverishment. For the last two or three years, it has been bad husbandry to sell hay even from the bottom lands. During the last season there were hundreds of tons of hay, of fair quality, sold in New York from 30 to 35 cents per hundred. On most of it, the owner paid from 14 to 16s. per ton freight, besides commission and other charges. If he hired it pressed, and hoops and slats found, it cost him from 12 to 14s. per ton more. If he owned his press, and found his own horse power, he pressed it a trifle under these rates, which left him for his hay in the barn, and for carting it to the vessel, from $2 to $2 75 per ton. With the present price of wool, or when good fair Merino wool will fetch 3s. per lb., hay is worth, at the barn of any farmer in this State, $6 to $8 per ton to feed to sheep, besides the value of the manure; which manure, to one who rightly values the improvement of his farm, is worth $2 more.

As a general rule, it is safe to calculate that store sheep will fetch one dollar more in the spring than in the fall; and a ton of hay, fed to sheep that are well sheltered, will carry eight through an ordinary winter.

Dr. Lee thought timothy exhausted the soil much more than clover. From scientific investigations, it has been well ascertained that timothy exhausted the soil three times as much as clover. He thought grasses should be cut before the seed is filled. It was correct, as had been stated, that the nutriment of the stems was exhausted in forming seed. He thought some of the plans which had been mentioned for making hay, required too much labour. He thought it the best way to mow grass after the dew was off—spread it, dry it as much as possible, and rake it into winrow. If it was dried enough, and it would frequently be so, he would load from the winrow, and save the labour of cocking it up. He had had some experience in irrigation, and thought its advantages were considerable. As to top-dressing for grass lands, he was much in favor of ashes. Charcoal dust, or charcoal pulverized, had proved very excellent for this purpose. The coal might be crushed in a bark mill. He would apply ashes or coal in the spring.—*Albany Argus.*

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A Fact for the Curious.—A. W. Palmer, of Cheam, in Surry, England, tried a very striking experiment respecting the production of wheat. In July, 1841, he put one grain of wheat into a common garden pot—in August he divided it into four plants, and in three weeks again divided these into twelve plants—in September these twelve were divided into thirty-two, which in November were divided into fifty—and he then placed them in the open ground. In July, 1842, twelve of them had failed, but the remainder of them were healthy. On the 19th of August they were cut down, and counted 2,197 stems, with an average of 50 grains to the stem, giving thus the increase of 97,000 grains.—*South Western Farmer.*

### Recipe for Making Bread.

James Roche, long celebrated in Baltimore, as a baker of excellent bread, having retired from business, has furnished the Baltimore American with the following recipe for making bread, with a request that it should be published for the information of the public:

"Take an earthen vessel larger at the top than the bottom, and in it put one pint of milk-warm water, one and a half pounds of flour, and half a pint of malt yeast; mix them well together, and set away,—in winter it should be in a warm place until it rises and falls again, which it will in from three to five hours—it may be set at night if wanted in the morning; then put two large spoonfuls of salt into two quarts of water, and mix it well with the above rising; then put in about nine pounds of flour, and work your dough well, and put it by until it becomes light; then make it out in loaves. New flour requires one-fourth more salt than old and dry flour. The water should be tempered according to the weather; in the spring and fall it should only be milk-warm; in hot weather, cold; and in winter, warm."—*Southern Cultivator.*

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### Raising early Cucumbers.

H. G. Dickerson, of Lyons, Wayne co., N. Y., one of the most successful cultivators of garden vegetables, adopts the following mode of raising early cucumbers. He makes his hot-bed at the usual time, and when the soil is placed upon the stack of manure, pieces of turf are placed just below the surface, on which the seed are planted. If the grass of this turf is alive, it is to be put upside downward. On the arrival of warm weather, and when the soil in the open air becomes fit for cultivation, these pieces of turf are removed entire, with the young plants upon them, and placed in highly manured ground where they are finally to grow. In this way the roots are taken up without the least mutilation, consequently no check is given to their growth. Afterwards, whenever there is any probability of a night frost, each hill is covered with a bell glass. These glasses have a small opening at top, which prevents the sun scorching the plants in case they are not removed in time; they are obtained at the glass-works in the neighbourhood, for four cents a piece; but where they cannot be had, boxes with panes inserted, will answer nearly as well.

By this means, cucumbers fit for the table, were raised the past season, by the first of June.—*Cultivator.*

## THE FARMERS' CABINET,

AND

## AMERICAN HERD-BOOK.

Philadelphia, Fourth Month, 1845.

The slaughtering of sheep for their tallow, is a great business in the northern part of Ohio. Hollister & Boalt, at Sandusky, killed last fall, upwards of 5,000, averaging about nine pounds of tallow each. The whole carcass was boiled up, except the hams; the pelts were shipped on a contract, and the tallow, we suppose, was intended for an eastern market. Probably more than 50,000 were slaughtered and tried up last autumn at Cleveland. To get an estimate of the value of sheep for this operation, the Collector of Customs at Cleveland, says in Ellsworth's Report, he made inquiry of a friend who purchased 20,000, and who had by last new years, killed 15,000 of them, and he learned that their estimated cost was about $1 12½ each; expense of butchering and rendering, 10 cents, making in the whole $1 22½. The average of tallow was eight lbs., worth at 5½ cts., 44 cts.—wool, say three lbs., at 33 cts., 99 cts., and the hams 5 cts., making the yield $1 48, leaving a gain of 25½ cts. on each sheep.

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The "American Agricultural Association" has been organized in New York, by the election of Luther Bradish for president, and twelve vice presidents, among whom we notice the names of Theodore Frelinghuysen, Vice-Chancellor McCoun, &c.

The objects of the Association are to collect and diffuse correct information throughout the United States, in Agriculture, Horticulture, and Arboriculture, and to promote the introduction of scientific knowledge into these arts. These objects it proposes to accomplish by the following means:

1. The discussion at stated meetings of topics in these arts.

2. The procuring of original, practical and scientific experiments in these arts, and of essays, papers and lectures for publication, in a series of transactions.

3. The establishment of a laboratory, for the examination of manures, composts, and marls, and the investigation of the mineral food of plants, fruits and seeds.

4. The establishment of an interchange of fruits, seeds and scions, with other societies, and among its own members.

5. The establishment of an Agricultural Library.

6. The founding of a Museum of seeds, fruits, specimens of choice varieties of plants, models of implements and buildings, pictures of improved animals, together with a collection of geological specimens, fossil manures, and other objects relating to agriculture.

The initiatory fee is $5—and $5 annually—or a life subscription of $30, to entitle to membership.

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It is feared the unusually cold weather of last week has greatly injured, if not destroyed, the peach crop.

## COLMAN'S AGRICULTURAL TOUR IN EUROPE.

It will not be forgotten that subscriptions to this work, are received at the office of the Farmers' Cabinet; where every farmer in the country will be heartily welcome as a subscriber to these publications. Single Numbers will be sold. The subscription price of Colman's Tour, as we have repeatedly advertised, is $5; single Numbers fifty cents each.

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Journal of Prison Discipline and Philanthropy. This work is published quarterly under the direction of the *Philadelphia Society for the Alleviation of the miseries of public Prisons.* It is an octavo of 96 pages, and the subscription price $2 per annum. The object of the work may be readily gathered from the title, and from the high character of the Society who have charge of it. It is published from the office of the Farmers' Cabinet, where subscriptions and payments will be received. Money transmitted from a distance to Josiah Tatum, No. 50 N. Fourth street, Philadelphia, kindly franked by the post-master, will ensure the prompt return of the work as published. The second number will shortly be ready for publication.

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Erastus H. Pease, of Albany, will shortly publish, if indeed by this time he has not already published, A Catechism of Agricultural Chemistry and Geology, by *James F. W. Johnston, M. A., F. R. S. S. L. & E.*, with an Introduction by *John Pitkin Norton*, of *Farmington*, Connecticut. This will, we apprehend, be a valuable work, judging from the well known character of the author. It will, as soon as it appears, be for sale at George S. Appleton's, No. 148 Chesnut st., and at this office.

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A copy of the proceedings of the Hamilton County Agricultural Society, Ohio, has lately been forwarded by the "Ploughboy," who, we are glad to find, has again waked up, and prepared for his spring labours. We could wish it might please him to spell his *name* correctly.

At their *Show* held in the Ninth mo. last, at Mount Pleasant, a few miles north of Cincinnati, J. W. Hoel exhibited 43 pumpkins weighing 543 lbs., being the product of one vine!

In the Address delivered by Wm. H. H. Taylor, allusion is made in strong terms to the little attention paid to the protection of stock from the inclemency of the weather. It is an erroneous idea, we think by far too prevalent, that these animals are provided by nature with all that is necessary in this repect. Having become domesticated, and subservient in all things to our wants and wishes, they look to us, and have a right to do so, to give them house room to shield them from the discomforts of exposure to cold and storm. Not only in Ohio, are remarks of this character seasonable and judicious, but here also in our own vicinity, the interests of the farmer, as well as humanity, call for more attention to the shelter of his stock in winter.

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In some remarks of the Editor on page 244, of last No., in relation to the awarding of premiums for the *best* crops, without a measurement of them to show what they actually amounted to, some of our friends thought there was room to infer, that the Editor supposed it probable that some of the crops mentioned in the Report immediately preceding the *remarks*, though the *best offered*, were yet in fact, *wretched* ones. The Editor thinks such an inference cannot be fairly drawn from the language used. It gives him pleasure, however, to say, that no one at all acquainted with the good farming characters of the persons who bore off the premiums, or with the Philadelphia Agricultural Society, would for one moment suppose that premiums would be awarded for any other than remarkably fine crops. We take this opportunity to repeat, that where Agricultural premiums are competed for, it is abundantly satisfactory to know that the ordeal of the half bushel or the steelyards, has been submitted to: this only will satisfy strangers.

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The following premiums will be awarded by the Pennsylvania Horticultural Society, at an intermediate meeting on the 6th of next month.

For the best single Tulips, twelve named varieties to be exhibited, $3.

For the next best do. do. $2.

For the best forced Cauliflowers, three in number, $2.

For the next best do. do. $2.

For the best Asparagus, three bunches of one pound each, $2.

For the best Rhubarb, blanched, two bunches of four pounds each, $2.

And at the stated meeting on the 20th of next month:

For the best American Seedling Camellia, exhibited at any stated meeting from December to May, inclusive, $10.

For the best Everblooming Roses, twelve named varieties, in pots, $7.

For the next best Everblooming Roses, twelve named varieties, in pots, $4.

For the best American Seedling Everblooming Rose, $3.

For the best forced Potatoes, half a peck, $2.

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James S. Lawrence, of Monmouth co., N. J., informed the Editor a few days ago, that in the fall of 1843, he put some apples—the *Redstreak*—into his cellar in open casks, which in the early part of 1844, he overhauled and packed in barrels with plaster of Paris. Three barrels were thus headed up, and remained in the cellar until the early part of last summer, when they were again assorted and put away in a box, with alternate layers of dry oak saw-dust. This box was put away under lock and key, access only being had to it as the apples were wanted. The family continued using them occasionally, till some time after early apples were ripe last year, and it was supposed they were all exhausted. On the 11th of last month—it being *Town-meeting* day—on unlocking the box for the purpose of again filling it with apples and saw-dust, he was surprised to find three of the apples of 1843, as originally put there, and which must have matured eighteen months ago. They were in good keeping, perfectly sound, and of pretty good flavour.

STABLE ECONOMY:—a Treatise on the management of Horses, in relation to stabling, grooming, feeding, watering and working; by JOHN STEWART, Veterinary Surgeon, &c., &c., Glasgow. With notes and additions, adapting it to American food and climate, by A. B. Allen, Editor of the American Agriculturist. Published by George S. Appleton, No. 148 Chesnut street, Philadelphia, and D. Appleton & Co., N. York.

This work, the subject of which is fully indicated by the title given above, is a very comprehensive and instructive one: and scarcely any person, let him be as well acquainted with the horse as he may, will rise from its perusal without having learned something which he did not know before. It may be procured, either of the publishers, or at this office.—Price $1.

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THE courtesy of the Editors, Dr. E. Emmons and Dr. A. J. Prime, has placed in our hands the first number of the *American Quarterly Journal of Agriculture and Science*, to be published by them in Albany, at $3 per annum. We announced some time ago, in the Cabinet, the intended publication of this work, and have looked for its appearance with considerable interest. Notwithstanding the large number of periodicals already in circulation, devoted to the farming interests, there is still, perhaps, room for a Quarterly Journal, which should occupy in American Agriculture the position which the Edinburgh Review does in English literature. It should be able to give a tone—a wholesome one of course—to what may perhaps be termed the National agriculture, and to hold up more prominently, because in a more extended form than is practicable in our small monthlies, the great leading principles of this most important of human avocations. These principles are as broad in their application as the earth's surface; and the Editors of the *American Quarterly* will, we trust, take a range over this whole ground, and give us—not local details, for these more appropriately belong to the local papers—but those extended views which can only be grasped and developed by the masters of this inexhaustible subject. We wish them all success in their enterprise.

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## SALE OF FULL-BLOODED NORMAN HORSES.

THE subscriber having relinquished Farming, will offer at Public Vendue, at his Farm in Moorestown, Burlington County, N. J., nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two imported Stallions, *Diligence* and *Buonaparte;* two imported Mares—three full-blooded Stud Colts, one, two and four years old—two full-blooded Fillies, three and four years old—two Fillies by *Diligence*, from a half-blood Canadian Mare, three and four years old, and one Filley four years old, by *Diligence*, from a well-bred English Mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation—which is believed to be the only one ever made to the United States—in all the principal Agricultural papers. In a few words, they are the *Canada* Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. *Diligence* has been a remarkably successful Stallion; he has been exhibited at the Fairs of the Pennsylvania and New York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the Colts of *Diligence* will be on the ground on the day of Sale, some of which, no doubt, may be purchased.

EDWARD HARRIS.

*Moorestown, Burlington Co., N. J.,*
*March 15th*, 1845.

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## Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

*March 15th*, 1845.

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WE keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

| | |
|---|---|
| THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price | $4 00 |
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| BRIDGEMAN'S GARDENER'S ASSISTANT; | 2 00 |
| THE AMERICAN POULTRY BOOK; | 37½ |
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| DANA'S MUCK MANUAL; | 60 |
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| THE FARMER'S MINE, | 75 |
| JOHNSTON'S Agricultural Chemistry, | 2 25 |
| HANNAM'S Economy of Waste Manures, | 25 |
| LIEBIG'S AGRICULTURAL CHEMISTRY, | 25 |
| " ANIMAL CHEMISTRY, | 25 |
| " FAMILIAR LETTERS, | 12½ |

As well as his larger works on Chemistry and Agriculture.

☞ We are prepared to bind books to order.

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THE New York papers contain the advertisement of the *Orange County Milk Association*, which was formed about a year ago. This is a new enterprise, and has, so far, we believe, been successful. They supply families at their residences with milk, cream and butter, of good quality, and as they say, at reasonable prices.

Particular attention is invited to the Sale of Edward Harris' Norman Horses, at Moorestown, New Jersey. It is very rarely that farmers of the United States can avail themselves of an opportunity for the purchase of such stock.

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PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrows; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable* and *Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by D. O. PROUTY.

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## Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels—$5 for three barrels—$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. We were entirely unable last spring to supply the demand, though it was then but an experiment in this vicinity. The results on corn have been generally very satisfactory. Early applicants will be most certainly supplied. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. JOSIAH TATUM.

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☞ SHORT ADVERTISEMENTS, ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

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## Seed Store,

*No. 23 Market Street, Philadelphia.*

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., March 15th. tf.

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The quantity of rain and melted snow which fell during the Third month, 1845, was nearly two inches and a half. ..... 2.415 inches.

*Penn. Hospital, 4th mo. 1st.*

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## THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the ninth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage: that is, one cent on each number within the state, or within one hundred miles of the place of publication out of the state,—and one cent and a half to any other part of the United States—and Post Masters are at liberty to receive subscriptions, and forward them to the Publisher under their frank—thus affording an opportunity to all who wish it, to order the work, and pay for it without expense of postage.

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Joseph Rakestraw, Printer.